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ABSTRACT

This document presents the results of a national survey of drug use and related attitudes among secondary school students in grades 8, 10, and 12. Data was derived from the ongoing national research and reporting program entitled "Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth." The survey investigated: (1) the prevalence of drug use among American secondary school students, and (2) trends in use by those students. Subjects were approximately 18,000 to 19,000 eighth grade students, roughly 15,000 tenth grade students, and (3) approximately 15,000 to 17,000 12th grade students. Two questionnaires were used to survey the eighth and tenth grade students and six questionnaires were used to survey the 12th graders. Findings on trends suggest that there have been appreciable declines in the use of a number of illicit drugs among seniors and even larger declines in their use among American college students and young adults. In 1993 and 1994 eighth graders showed an increase in their use of a number of drugs and 10th- and 12th-graders joined them, fulfilling predictions based on eroding beliefs and attitudes. This study has demonstrated over the years that changes in perceived risk and disapproval have been important causes of change in the use of a number of drugs. These beliefs and attitudes surely are influenced by the amount and nature of the public attention being paid to the drug issue. (SR)

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National Institute on Drug Abuse

NATIONAL SURVEY RESULTS ON DRUG USE
from
THE MONITORING THE FUTURE STUDY, 1975-1994

Volume I

Secondary School Students

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NATIONAL SURVEY RESULTS ON DRUG USE
from
THE MONITORING THE FUTURE STUDY, 1975-1994

Volume I

Secondary School Students

by

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Chapter 1

INTRODUCTION

This two-volume report presents the results of the twentieth national survey of drug use and related attitudes among American high school seniors, the fifteenth such survey of American college students, and the fourth such survey of eighth and tenth grade students. Volume I contains the results from the secondary school samples of eighth, tenth, and twelfth graders. The results from college students and young adults are reported in Volume II.

All of these data derive from the ongoing national research and reporting program entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth, which is conducted at the University of Michigan's Institute for Social Research and has been funded through a series of investigator-initiated research grants from the National Institute on Drug Abuse. In the past the study was sometimes called the National High School Senior Survey, because each year, since 1975, a representative sample of all seniors in public and private high schools in the coterminous United States has been surveyed. However, the study also surveys: (a) representative samples of young adults from previous graduating classes who are administered follow-up surveys by mail; (b) representative samples of American college students one to four years past high school, who are included in these follow-up samples; and, (c) since 1991, annual surveys of eighth and tenth grade students.

SURVEYS OF SECONDARY SCHOOL STUDENTS

Two of the major topics included in this series of annual reports are (1) the prevalence of drug use among American secondary school students (specifically in eighth, tenth, and twelfth grades), and (2) trends in use by those students. Distinctions are made among important demographic subgroups in these populations. Data on grade of first use, trends in use at lower grade levels, and intensity of drug use also are reported. Key attitudes and beliefs about drug use, and perceptions of certain relevant aspects of the social environment are included as potential explanatory factors.

The annual surveys of eighth and tenth grade students use procedures and measures that closely parallel those for high school seniors. Two instead of six questionnaire forms are used to survey eighth and tenth grade students, and therefore, fewer variables are measured on the younger students.

SURVEYS OF COLLEGE STUDENTS AND YOUNG ADULTS GENERALLY

Data on the prevalence and trends in drug use among young adults who have completed high school are included in this report series. These data are reported primarily in Volume II, although a brief summary of them is given in Chapter 2 of this volume, "Overview of Key Findings." The period of young adulthood (late teens to late twenties) is particularly important because this tends to be the period of peak use for many drugs.

The Monitoring the Future study design calls for continuing follow-up panel studies—through age 32—of a subsample of the participants in each participating senior class, beginning with the class of 1976. In 1994 representative samples of the graduating classes of 1980 through 1993, corresponding to modal ages of 19 to 32 provided survey data. Comprehensive results from this young adult population are presented in Volume II.[1]

Two chapters in Volume II present data on college students specifically. Trend data are provided since 1980, the first year that a good national sample of college students one to four years past high school was available from the follow-up survey. College students have not usually been well represented in national household surveys, because many college students live on campus in group dwellings (dormitories, fraternities, and sororities), which are often not included in household surveys. (The National Household Survey on Drug Abuse, conducted in earlier years by NIDA, and now by the Substance Abuse and Mental Health Services Administration, was revised in 1991 to include such group dwellings.)

CONTENT AREAS COVERED IN THIS REPORT

Initially, eleven separate classes of drugs were distinguished for this series of reports: marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, opiates other than heroin (both natural and synthetic), stimulants (more specifically, amphetamines), sedatives, tranquilizers, alcohol, and tobacco. This particular organization of drug use classes was chosen to heighten comparability with a parallel series of publications based on the National Institute on Drug Abuse's National Household Surveys on Drug Abuse. Separate statistics also are presented for several sub-classes of drugs within these more general classes: PCP and LSD (both hallucinogens), barbiturates and methaqualone (both sedatives), the amyl and butyl nitrites (both inhalants), and crack and other cocaine. A number of these drugs appeared on the American scene after the study began, and were added to the questionnaires in subsequent years. Trend data for PCP and nitrites are available since 1979 when questions about the use of these drugs were added to the study because of increasing concern over their rising popularity and possibly deleterious effects. For similar reasons, a single question about crack cocaine was added to the 1986 survey and more detailed questions on crack were added in 1987. MDMA or "ecstasy" was added in 1989 (to follow-up surveys only) and crystal methamphetamine ("ice") was added in 1990. Barbiturates and methaqualone, two components of the "sedatives" class as used here, have been separately measured from the outset. Data for them are presented separately because their trend lines are substantially different. Anabolic steroids were added in 1989 because of reports of their increasing illicit use among young people.

For drugs other than alcohol, cigarettes, smokeless tobacco, and nonprescription stimulants, practically all of the information reported here deals with illicit use of controlled substances. Respondents are asked to exclude any occasions on which they used any of the psychotherapeutic drugs under medical supervision. (Some data on the medically supervised use of such drugs are contained in the full 1977, 1978, 1981, and 1983 volumes in this series. A separate article discusses trends in the medical use of these drugs[2].)

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[1] Older cohorts are now followed up again at age 35, with the long-term plan being to follow them at five year intervals thereafter.

Throughout this report we have chosen to focus attention on drug use at the higher frequency levels rather than simply report proportions who have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While there is no public consensus on what levels or patterns of use constitute "abuse," there is surely a consensus that higher levels of use are more likely to have detrimental effects for the user and society. We have also introduced indirect measures of dosage per occasion, by asking respondents the duration and intensity of the highs they usually experience with each type of drug. Chapter 7 reports those results.

For both licit and illicit drugs, separate chapters are devoted to grade of first use; the students' own attitudes and beliefs; related attitudes, beliefs, and behaviors of others in their social environment; and perceived drug availability. Some of these variables have proven to be important explanators of observed secular trends in use.

Chapter 10, "Other Findings from the Study," discusses use of nonprescription stimulants including diet pills, stay-awake pills, and the "look-alike" pseudo-amphetamines. Questions on these substances were placed in the survey beginning in 1982 because the use of them appeared to be on the rise, and some respondents inappropriately included them in their answers about amphetamine use. That inappropriate inclusion affected the observed trends, until the clarification in 1982.

Chapter 10 also presents trend results from a set of questions about marijuana use at a daily or near-daily level. These questions were added to enable us to develop a more complete individual history of daily use over a period of years. They reveal some interesting facts about the frequent users of this drug.

PURPOSES AND RATIONALE FOR THIS RESEARCH

Perhaps no area has proven more clearly appropriate for the application of systematic research and reporting than the drug field. It is a rapidly changing field. It has importance for the well-being of the nation, and a large amount of legislative and administrative intervention is addressed to it. Young people are often at the leading edge of social change—and this has been particularly true of drug use. The massive upsurge in illicit drug use during the last twenty-five years has proven to be a youth phenomenon; the onset of use is most likely to occur during adolescence. Young adults in their twenties are also among the age groups at highest risk for illicit drug use: indeed, the widespread epidemic of the last twenty years really began on the nation's college campuses. From one year to the next, particular drugs rise or fall in popularity, and related problems occur for youth, for their families, for governmental agencies, and for society as a whole. This year's findings show that disturbing changes in drug use are continuing.

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[2] Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1987). Psychotherapeutic, licit, and illicit use of drugs among adolescents: An epidemiological perspective. *Journal of Adolescent Health Care*, 8, 36-51.

One of the major purposes of the Monitoring the Future series is to develop an accurate picture of current drug use and trends. This is a formidable task, given the illicit and illegal nature of most of the phenomena under study. A reasonably accurate picture of the basic size and contours of the illicit drug use problem among young Americans is a prerequisite for rational public debate and policy making. In the absence of reliable *prevalence* data, substantial misconceptions can develop and resources may be misallocated. In the absence of reliable data on *trends*, early detection and localization of emerging problems are more difficult. In addition, assessments of the impact of major historical and policy-induced events are much more conjectural.

The study also monitors a number of factors which we believe help to *explain* the changes observed in drug use. Many are discussed in this series of volumes. They include peer norms regarding drugs, beliefs about the dangers of drugs, perceived availability, and so on. In fact, monitoring these factors has made it possible to examine a central policy issue for the country in its war on drugs—namely the relative importance of supply reduction effects vs. demand reduction effects in bringing about some of the observed declines in drug use. We also have developed a general theory of drug epidemics which makes use of many of these concepts to explain the rises and falls in use which occur[3].

In addition to accurately assessing prevalence and trends and trying to determine the causes of them, the Monitoring the Future study has other important research objectives. Among them: helping to determine which young people are at greatest risk for developing various patterns of drug abuse; gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use, and monitoring how those orientations are shifting over time; determining the immediate and more general aspects of the social environment associated with drug use and abuse; determining how major transitions in social environment (entry into military service, civilian employment, college, unemployment) or in social roles (marriage, pregnancy, parenthood) affect drug use; determining the life course of the various drug-using behaviors from early adolescence to middle adulthood; distinguishing such "age effects" from cohort and period effects in determining drug use; determining the effects of social legislation on various types of substance use; and, determining the changing connotations of drug use and changing patterns of multiple drug use among youth. We believe that the differentiation of period, age, and cohort effects in substance use of various types has been a particularly important contribution of the project.

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[3] See Johnston, L.D. (1991). Toward a theory of drug epidemics. *In* R.L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

It is one that its cohort-sequential research design is especially well-suited to make.[4] Readers interested in publications dealing with any of these other areas should write the authors at the Institute for Social Research, The University of Michigan, Ann Arbor, Michigan, 48106-1248.

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[4] For an elaboration and discussion of the full range of objectives of this research in the domain of substance abuse see Johnston, L.D., O'Malley, P.M., Bachman, J.G., and Schulenberg, J. (1993). *The aims, objectives, and rationale of the Monitoring the Future Project.* (Monitoring the Future Occasional Paper 34). Ann Arbor, MI: Institute for Social Research.

Chapter 2

OVERVIEW OF KEY FINDINGS

Volumes I and II of this monograph report the findings through 1994 of the ongoing research and reporting series entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth. Over its twenty-year existence, the study has consisted of in-school surveys of nationally representative samples of (a) high school seniors each year since 1975 and (b) eighth and tenth grade students each year since 1991. In addition, beginning in 1976, follow-up surveys have been conducted by mail on representative subsamples of the respondents from each previously participating twelfth grade.

Findings on the prevalence and trends in drug use and related factors are presented in this report for secondary school students (Volume I) and also for young adult high school graduates 19-32 years old, as well as college students specifically (in Volume II). Trend data are presented for varying time intervals, covering the past twenty years in the case of the high school senior population. For college students, a particularly important subset of the young adult population for which very little nationally representative data exists, we present detailed prevalence and trend results covering a fourteen year interval (since 1980). The high school dropout segment of the population—about 15%-20% of an age group—is of necessity omitted from the coverage of these populations, though this omission should have a negligible effect on the coverage of college students. Appendix A to this report discusses the likely impact of omitting dropouts from the sample coverage at senior year. Very few students will have left school by eighth grade, of course, and relatively few by the end of tenth grade, so the results of the school surveys at those levels should be generalizable to the great majority of the relevant age cohorts.

A number of important findings emerge from these five national populations—eighth grade students, tenth grade students, twelfth grade students, college students, and all young adults through age 32 who are high school graduates. They have been summarized and integrated in this chapter so that the reader may quickly get an overview of the key results. Because so many populations, drugs, and prevalence intervals are discussed here, a single integrative table (Table 1) showing the 1991-1994 trends for all drugs on all five populations is included in this chapter.

TRENDS IN ILLICIT DRUG USE

- In the previous volume in this series we noted an increase in the use of a number of illicit drugs among the secondary students and some reversals among them in key attitudes and beliefs. (In fact, in the volume reporting 1992 survey results, we noted the beginning of such reversals among eighth graders, the youngest respondents surveyed in this study.) Specifically, the proportions seeing great risk in using drugs began to decline as did the proportions saying they disapproved of use. As predicted earlier, those reversals indeed presaged ". . . an end to the improvements in the drug situation that the nation may be

TABLE 1

Trends in Prevalence of Various Drugs for Five Populations: Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

(Entries are percentages)

	Lifetime					Annual					30-Day					Daily				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–94 change	1991	1992	1993	1994	'93–'94 change
Any Illicit Drug[a]																				
8th Grade	18.7	20.6	22.5	25.7	+3.2ss	11.3	12.9	15.1	18.5	+3.4sss	5.7	6.8	8.4	10.9	+2.5sss	—	—	—	—	—
10th Grade	30.6	29.8	32.8	37.4	+4.6sss	21.4	20.4	24.7	30.0	+5.3sss	11.6	11.0	14.0	18.5	+4.5sss	—	—	—	—	—
12th Grade	44.1	40.7	42.9	45.6	+2.7ss	29.4	27.1	31.0	35.8	+4.8sss	16.4	14.4	18.3	21.9	+3.6sss	—	—	—	—	—
College Students	50.4	48.8	45.9	45.5	-0.4	29.2	30.6	30.6	31.4	+0.7	15.2	16.1	15.1	16.0	+0.9	—	—	—	—	—
Young Adults	62.2	60.2	59.6	57.5	-2.2s	27.0	28.3	28.4	28.4	0.0	15.1	14.8	14.9	15.3	+0.4	—	—	—	—	—
Any Illicit Drug[a] Other Than Marijuana																				
8th Grade	14.3	15.6	16.8	17.5	+0.7	8.4	9.3	10.4	11.3	+0.9	3.8	4.7	5.3	5.6	+0.3	—	—	—	—	—
10th Grade	19.1	19.2	20.9	21.7	+0.8	12.2	12.3	13.9	15.2	+1.3	5.5	5.7	6.5	7.1	+0.6	—	—	—	—	—
12th Grade	26.9	25.1	26.7	27.6	+0.9	16.2	14.9	17.1	18.0	+0.9	7.1	6.3	7.9	8.8	+0.9	—	—	—	—	—
College Students	25.8	26.1	24.3	22.0	-2.4	13.2	13.1	12.5	12.2	-0.3	4.3	4.6	5.4	4.6	-0.8	—	—	—	—	—
Young Adults	37.8	37.0	34.6	33.4	-1.2	14.3	14.1	13.0	13.0	+0.1	5.4	5.5	4.9	5.3	+0.4	—	—	—	—	—
Any Illicit Drug[a] Including Inhalants																				
8th Grade	28.5	29.6	32.3	35.1	+2.8ss	16.7	18.2	21.1	24.2	+3.1ss	8.8	10.0	12.0	14.3	+2.3ss	—	—	—	—	—
10th Grade	36.1	36.2	38.7	42.7	+4.0sss	23.9	23.5	27.4	32.5	+5.1sss	13.1	12.6	15.5	20.0	+4.5sss	—	—	—	—	—
12th Grade	47.6	44.4	46.6	49.1	+2.5s	31.2	28.8	32.5	37.6	+5.1sss	17.8	15.5	19.3	23.0	+3.7sss	—	—	—	—	—
College Students	52.0	50.3	49.1	47.0	-2.1	29.8	31.1	31.7	31.9	+0.2	15.1	16.5	15.7	16.4	+0.7	—	—	—	—	—
Young Adults	63.4	61.2	61.2	58.5	-2.7ss	27.8	29.2	28.9	29.2	+0.3	15.4	15.3	15.1	16.1	+1.0	—	—	—	—	—
Marijuana/Hashish																				
8th Grade	10.2	11.2	12.6	16.7	+4.1sss	6.2	7.2	9.2	13.0	+3.8sss	3.2	3.7	5.1	7.8	+2.7sss	0.2	0.2	0.4	0.7	+0.3ss
10th Grade	23.4	21.4	24.4	30.4	+6.0sss	16.5	15.2	19.2	25.2	+6.0sss	8.7	8.1	10.9	15.8	+4.9sss	0.8	0.8	1.0	2.2	+1.2sss
12th Grade	36.7	32.6	35.3	38.2	+2.9s	23.9	21.9	26.0	30.7	+4.7sss	13.8	11.9	15.5	19.0	+3.5sss	2.0	1.9	2.4	3.6	+1.2sss
College Students	46.3	44.1	42.0	42.2	+0.2	26.5	27.7	27.9	29.3	+1.5	14.1	14.6	14.2	15.1	+0.8	1.8	1.6	1.9	1.8	-0.1
Young Adults	58.6	56.4	55.9	53.7	-2.1s	23.8	25.2	25.1	25.5	+0.5	13.5	13.3	13.4	14.1	+0.6	2.3	2.3	2.4	2.8	+0.4
Inhalants[b,c]																				
8th Grade	17.6	17.4	19.4	19.9	+0.5	9.0	9.5	11.0	11.7	+0.7	4.4	4.7	5.4	5.6	+0.2	0.2	0.3	0.3	0.2	-0.1
10th Grade	15.7	16.6	17.5	18.0	+0.5	7.1	7.5	8.4	9.1	+0.7	2.7	2.7	3.3	3.6	+0.3	0.1	0.1	0.2	0.1	0.0
12th Grade	17.6	16.6	17.4	17.7	+0.3	6.6	6.2	7.0	7.7	+0.7	2.4	2.3	2.5	2.7	+0.2	0.2	0.1	0.1	0.1	-0.1
College Students	14.4	14.2	14.8	12.0	-2.8s	3.6	3.1	3.8	3.0	-0.8	0.9	1.1	1.3	0.6	-0.7	—	—	—	—	—
Young Adults	13.4	13.5	14.1	13.2	-0.8	2.0	1.9	2.1	2.1	0.0	0.5	0.6	0.7	0.5	-0.2	*	*	*	*	0.0
Nitrites[d]																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	+0.3	0.9	0.5	0.9	1.1	+0.2	0.4	0.3	0.6	0.4	-0.2	0.2	0.1	0.1	0.2	+0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.4	1.2	1.3	1.0	-0.4	0.2	0.1	0.4	0.3	-0.2	*	0.1	0.2	0.1	-0.1	*	0.0	0.2	0.0	-0.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 1 (cont.)

Trends in Prevalence of Various Drugs for Five Populations: Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime					Annual					30-Day					Daily				
	1991	1992	1993	1994	'93-'94 change	1991	1992	1993	1994	'93-'94 change	1991	1992	1993	1994	'93-'94 change	1991	1992	1993	1994	'93-'94 change
Hallucinogens[c]																				
8th Grade	3.2	3.8	3.9	4.3	+0.4	1.9	2.5	2.6	2.7	+0.1	0.8	1.1	1.2	1.3	+0.1	0.1	0.1	0.1	0.1	0.0
10th Grade	6.1	6.4	6.8	8.1	+1.3s	4.0	4.3	4.7	5.8	+1.1s	1.6	1.8	1.9	2.4	+0.5	*	0.1	0.1	0.1	0.0
12th Grade	9.6	9.2	10.9	11.4	+0.5	5.8	5.9	7.4	7.6	+0.2	2.2	2.1	2.7	3.1	+0.4	0.1	0.1	0.1	0.1	0.0
College Students	11.3	12.0	11.8	10.0	-1.8	6.3	6.8	6.0	6.2	+0.2	1.2	2.3	2.5	2.1	-0.4	—	—	—	—	—
Young Adults	15.7	15.7	15.4	15.4	0.0	4.5	5.0	4.5	4.8	+0.3	1.1	1.5	1.2	1.4	+0.3	0.0	0.0	*	0.0	0.0
LSD																				
8th Grade	2.7	3.2	3.5	3.7	+0.2	1.7	2.1	2.3	2.4	+0.1	0.6	0.9	1.0	1.1	+0.1	*	*	*	*	0.0
10th Grade	5.6	5.8	6.2	7.2	+1.0	3.7	4.0	4.2	5.2	+1.0s	1.5	1.6	1.6	2.0	+0.4	*	0.1	*	*	0.0
12th Grade	8.8	8.6	10.3	10.5	+0.2	5.2	5.6	6.8	6.9	+0.1	1.9	2.0	2.4	2.6	+0.2	0.1	0.1	0.1	0.1	0.0
College Students	9.6	10.6	10.6	9.2	-1.4	5.1	5.7	5.1	5.2	+0.1	0.8	1.8	1.6	1.8	+0.2	—	—	—	—	—
Young Adults	13.5	13.8	13.6	13.8	+0.3	3.8	4.3	3.8	4.0	+0.2	0.8	1.1	0.8	1.1	+0.3	0.0	0.0	0.0	0.0	0.0
PCP[d]																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	-0.1	1.4	1.4	1.4	1.6	+0.2	0.5	0.6	1.0	0.7	-0.3	0.1	0.1	0.1	0.3	+0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	3.1	2.0	1.9	2.0	+0.1	0.3	0.3	0.2	0.3	+0.1	0.1	0.2	0.2	0.1	-0.1	*	0.0	0.1	0.0	-0.1
Hallucinogens Other than LSD																				
8th Grade	1.4	1.7	1.7	2.2	+0.5ss	0.7	1.1	1.0	1.3	+0.3s	0.3	0.4	0.5	0.7	+0.2s	*	*	*	*	0.0
10th Grade	2.2	2.5	2.8	3.8	+1.0ss	1.3	1.4	1.9	2.4	+0.5s	0.4	0.5	0.7	1.0	+0.3s	*	*	*	*	0.0
12th Grade	3.7	3.3	3.9	4.9	+1.0s	2.0	1.7	2.2	3.1	+0.9ss	0.7	0.5	0.8	1.2	+0.4s	*	*	*	*	0.0
College Students	6.0	5.7	5.4	4.4	-0.9	3.1	2.6	2.7	2.8	0.0	0.6	0.7	1.1	0.8	-0.3	—	—	—	—	—
Young Adults	8.4	8.0	7.6	7.4	-0.2	1.7	1.9	1.9	2.0	+0.1	0.3	0.5	0.6	0.6	0.0	0.0	0.0	*	0.0	0.0
Cocaine																				
8th Grade	2.3	2.9	2.9	3.6	+0.7s	1.1	1.5	1.7	2.1	+0.4	0.5	0.7	0.7	1.0	+0.3s	0.1	*	0.1	0.1	0.0
10th Grade	4.1	3.3	3.6	4.3	+0.7s	2.2	1.9	2.1	2.8	+0.7ss	0.7	0.7	0.9	1.2	+0.3	0.1	*	0.1	0.1	0.0
12th Grade	7.8	6.1	6.1	5.9	-0.2	3.5	3.1	3.3	3.6	+0.3	1.4	1.3	1.3	1.5	+0.2	0.1	0.1	0.1	0.1	0.0
College Students	9.4	7.9	6.3	5.0	-1.4	3.6	3.0	2.7	2.0	-0.7	1.0	1.0	0.7	0.6	-0.2	*	0.0	0.0	0.1	+0.1
Young Adults	21.0	19.5	16.9	15.2	-1.8ss	6.2	5.7	4.7	4.3	-0.4	2.0	1.8	1.4	1.3	0.0	0.1	*	0.1	*	0.0
Crack																				
8th Grade	1.3	1.6	1.7	2.4	+0.7sss	0.7	0.9	1.0	1.3	+0.3s	0.3	0.5	0.4	0.7	+0.3ss	*	*	0.1	*	0.0
10th Grade	1.7	1.5	1.8	2.1	+0.3	0.9	0.9	1.1	1.4	+0.3s	0.3	0.4	0.5	0.6	+0.1	*	*	*	*	0.0
12th Grade	3.1	2.6	2.6	3.0	+0.4	1.5	1.5	1.5	1.9	+0.4	0.7	0.6	0.7	0.8	+0.1	0.1	0.1	0.1	0.1	0.0
College Students	1.5	1.7	1.3	1.0	-0.4	0.5	0.4	0.6	0.5	-0.2	0.3	0.1	0.1	0.1	0.0	—	—	—	—	—
Young Adults	4.8	5.1	4.3	4.4	+0.1	1.2	1.4	1.3	1.1	-0.1	0.4	0.4	0.4	0.3	-0.1	*	*	0.1	*	0.0
Other Cocaine[e]																				
8th Grade	2.0	2.4	2.4	3.0	+0.6s	1.0	1.2	1.3	1.7	+0.4	0.5	0.5	0.6	0.9	+0.3s	*	*	*	*	0.0
10th Grade	3.8	3.0	3.3	3.8	+0.5	2.1	1.7	1.8	2.4	+0.6s	0.6	0.6	0.7	1.0	+0.3s	*	*	*	*	0.0
12th Grade	7.0	5.3	5.4	5.2	-0.2	3.2	2.6	2.9	3.0	+0.1	1.2	1.0	1.2	1.3	+0.1	0.1	*	0.1	0.1	0.0
College Students	9.0	7.6	6.3	4.6	-1.7	3.2	2.4	2.5	1.8	-0.7	1.0	0.9	0.6	0.3	-0.3	—	—	—	—	—
Young Adults	19.8	18.4	15.1	13.9	-1.2	5.4	5.1	3.9	3.6	-0.3	1.8	1.7	1.1	1.0	-0.1	0.1	*	*	*	0.0

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

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TABLE 1 (cont.)

Trends in Prevalence of Various Drugs for Five Populations: Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime					Annual					30-Day					Daily				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change
Ecstasy[f]																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	2.0	2.9	2.3	2.1	-0.2	0.9	2.0	0.8	0.5	-0.3	0.2	0.4	0.3	0.2	-0.1	—	—	—	—	—
Young Adults	3.2	3.9	3.8	3.8	+0.1	0.8	1.0	0.8	0.7	-0.1	0.1	0.3	0.3	0.2	-0.1	0.0	0.0	*	0.0	0.0
Heroin																				
8th Grade	1.2	1.4	1.4	2.0	+0.6sss	0.7	0.7	0.7	1.2	+0.5sss	0.3	0.4	0.4	0.6	+0.2s	*	*	*	0.1	0.0
10th Grade	1.2	1.2	1.3	1.5	+0.2	0.5	0.6	0.7	0.9	+0.2	0.2	0.2	0.3	0.4	+0.1	*	*	*	*	0.0
12th Grade	0.9	1.2	1.1	1.2	+0.1	0.4	0.6	0.5	0.6	+0.1	0.2	0.3	0.2	0.3	+0.1	*	*	*	*	0.0
College Students	0.5	0.5	0.6	0.1	-0.5s	0.1	0.1	0.1	0.1	0.0	0.1	0.0	*	0.0	0.0	—	—	—	—	—
Young Adults	0.9	0.9	0.9	0.8	0.0	0.1	0.2	0.2	0.1	0.0	*	0.1	0.1	0.1	0.0	0.0	*	*	*	0.0
Other Opiates[g]																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	6.4	6.6	+0.2	3.5	3.3	3.6	3.8	+0.2	1.1	1.2	1.3	1.5	+0.2	0.1	*	*	0.1	0.0
College Students	7.3	7.3	6.2	5.1	-1.1	2.7	2.7	2.5	2.4	-0.1	0.8	1.0	0.7	0.4	-0.3	—	—	—	—	—
Young Adults	9.3	8.9	8.1	8.2	+0.1	2.5	2.5	2.2	2.5	+0.3	0.6	0.7	0.7	0.6	-0.1	*	*	*	*	0.0
Stimulants[g]																				
8th Grade	10.5	10.8	11.8	12.3	+0.5	6.2	6.5	7.2	7.9	+0.7	2.6	3.3	3.6	3.6	0.0	0.1	0.1	0.1	0.1	0.0
10th Grade	13.2	13.1	14.9	15.1	+0.2	8.2	8.2	9.6	10.2	+0.6	3.3	3.6	4.3	4.5	+0.2	0.1	0.1	0.3	0.1	-0.2
12th Grade	15.4	13.9	15.1	15.7	+0.6	8.2	7.1	8.4	9.4	+1.0	3.2	2.8	3.7	4.0	+0.3	0.2	0.2	0.2	0.2	0.0
College Students	13.0	10.5	10.1	9.2	-0.9	3.9	3.6	4.2	4.2	0.0	1.0	1.1	1.5	1.5	-0.1	0.1	0.0	0.1	0.1	0.0
Young Adults	22.4	20.2	18.7	17.1	-1.6s	4.3	4.1	4.0	4.5	+0.5	1.5	1.5	1.5	1.7	+0.3	0.1	0.1	0.1	0.1	0.0
Ice[f]																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	3.1	3.4	+0.3	1.4	1.3	1.7	1.8	+0.1	0.6	0.5	0.6	0.7	+0.1	0.1	0.1	0.1	*	0.0
College Students	1.3	0.6	1.6	1.3	-0.4	0.1	0.2	0.7	0.8	+0.1	0.0	0.0	0.3	0.5	+0.2	—	—	—	—	—
Young Adults	2.9	2.2	2.7	2.5	-0.2	0.3	0.4	0.8	0.9	+0.1	*	0.1	0.3	0.5	+0.2	0.0	0.0	0.0	0.1	+0.1
Barbiturates[g]																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	+0.7	3.4	2.8	3.4	4.1	+0.7s	1.4	1.1	1.3	1.7	+0.4s	0.1	*	0.1	*	0.0
College Students	3.5	3.8	3.5	3.2	-0.3	1.2	1.4	1.5	1.2	-0.3	0.3	0.7	0.4	0.4	0.0	—	—	—	—	—
Young Adults	8.2	7.4	6.5	6.4	0.0	1.8	1.6	1.9	1.8	-0.1	0.5	0.5	0.6	0.6	0.0	0.0	*	0.0	*	0.0
Tranquilizers[g]																				
8th Grade	3.8	4.1	4.4	4.6	+0.2	1.8	2.0	2.1	2.4	+0.3	0.8	0.8	0.9	1.1	+0.2	*	*	0.1	0.1	0.0
10th Grade	5.8	5.9	5.7	5.4	-0.3	3.2	3.5	3.3	3.3	0.0	1.2	1.5	1.1	1.5	+0.4s	*	*	*	*	0.0
12th Grade	7.2	6.0	6.4	6.6	+0.2	3.6	2.8	3.5	3.7	+0.2	1.4	1.0	1.2	1.4	+0.2	0.1	*	*	0.1	0.0
College Students	6.8	6.9	6.3	4.4	-1.9s	2.4	2.9	2.4	1.8	-0.6	0.6	0.6	0.4	0.4	0.0	—	—	—	—	—
Young Adults	11.8	11.3	10.5	9.9	-0.6	3.5	3.4	3.1	2.9	-0.2	0.9	1.0	1.0	0.8	-0.2	0.0	*	*	*	0.0

SOURCE: The Monitoring the Future Study, the University of Michigan

(Table continued on next page)

TABLE 1 (cont.)

Trends in Prevalence of Various Drugs for Five Populations: Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime					Annual					30-Day					Daily				
	1991	1992	1993	1994	'93-'94 change	1991	1992	1993	1994	'93-'94 change	1991	1992	1993	1994	'93-'94 change	1991	1992	1993	1994	'93-'94 change
Alcohol[h]																				
Any use																				
8th Grade	70.1	69.3	67.1	—		54.0	53.7	51.6	—		25.1	26.1	26.2	—		0.5	0.6	0.8	—	
			55.7	55.8	+0.1			45.4	46.8	+1.4			24.3	25.5	+1.2			1.0	1.0	0.0
10th Grade	83.8	82.3	80.8	—		72.3	70.2	69.3	—		42.8	39.9	41.5	—		1.3	1.2	1.6	—	
			71.6	71.1	-0.5			63.4	63.9	+0.5			38.2	39.2	+1.0			1.8	1.7	-0.1
12th Grade	88.0	87.5	87.0	—		77.7	76.8	76.0	—		54.0	51.3	51.0	—		3.6	3.4	2.5	—	
			80.0	80.4	+0.4			72.7	73.0	+0.3			48.6	50.1	+1.5			3.4	2.9	-0.5
College Students	93.6	91.8	91.2	—		88.3	86.9	85.5	—		74.7	71.4	72.0	—		4.1	3.7	3.2	—	
			87.1	88.1	+1.0			83.8	82.7	-1.1			67.7	67.5	-0.2			4.5	3.6	-1.0
Young Adults	94.1	93.4	93.7	—		86.9	86.2	86.5	—		70.6	69.0	69.7	—		4.9	4.5	4.5	—	
			90.4	91.2	+0.8			84.2	83.7	-0.5			68.9	67.7	+0.7			4.5	3.8	-0.7
5+ drinks in last 2 weeks																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.9	13.4	13.5	14.5	+1.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.9	21.1	23.0	23.6	+0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.8	27.9	27.5	28.2	+0.7
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	42.8	41.4	40.2	40.0	-0.2
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.7	34.2	34.4	33.7	-0.7
Been Drunk[f]																				
8th Grade	26.7	26.8	26.4	25.9	-0.5	17.5	18.3	18.2	18.2	0.0	7.6	7.5	7.8	8.7	+0.9	0.1	0.1	0.2	0.3	+0.1
10th Grade	50.0	47.7	47.9	47.2	-0.7	40.1	37.0	37.8	38.0	+0.2	20.5	18.1	19.8	20.3	+0.5	0.2	0.3	0.4	0.4	0.0
12th Grade	65.4	63.4	62.5	62.9	+0.4	52.7	50.3	49.6	51.7	+2.1	31.6	29.9	28.9	30.8	+1.9	0.9	0.8	0.9	1.2	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes																				
Any use																				
8th Grade	44.0	45.2	45.3	46.1	+0.8	—	—	—	—	—	14.3	15.5	16.7	18.6	+1.9s	7.2	7.0	8.3	8.8	+0.5
10th Grade	55.1	53.5	56.3	56.9	+0.6	—	—	—	—	—	20.8	21.5	24.7	25.4	+0.7	12.6	12.3	14.2	14.6	+0.4
12th Grade	63.1	61.8	61.9	62.0	+0.1	—	—	—	—	—	28.3	27.8	29.9	31.2	+1.3	18.5	17.2	19.0	19.4	+0.4
College Students	—	—	—	—	—	35.6	37.3	38.8	37.6	-1.1	23.2	23.5	24.5	23.5	-1.0	13.8	14.1	15.2	13.2	-2.0
Young Adults	—	—	—	—	—	37.7	37.9	37.8	38.3	+0.5	28.2	28.3	28.0	27.9	0.0	21.7	20.9	20.8	20.7	0.0
1/2 pack+/day																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.1	2.9	3.5	3.6	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.5	6.0	7.0	7.6	+0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.7	10.0	10.9	11.2	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	8.9	8.9	8.0	-0.9
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.0	15.7	15.5	15.3	-0.2
Smokeless Tobacco[d]																				
8th Grade	22.2	20.7	18.7	19.9	+1.2	—	—	—	—	—	6.9	7.0	6.6	7.7	+1.1	1.6	1.8	1.5	1.9	+0.4
10th Grade	28.2	26.6	28.1	29.2	+1.1	—	—	—	—	—	10.0	9.6	10.4	10.5	+0.1	3.3	3.0	3.3	3.0	-0.3
12th Grade	—	32.4	31.0	30.7	-0.3	—	—	—	—	—	—	11.4	10.7	11.1	+0.4	—	4.3	3.3	3.9	+0.6s
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[i]																				
8th Grade	1.9	1.7	1.6	2.0	+0.4ss	1.0	1.1	0.9	1.2	+0.3ss	0.4	0.5	0.5	0.5	0.0	*	*	0.1	*	-0.1
10th Grade	1.8	1.7	1.7	1.8	+0.1	1.1	1.1	1.0	1.1	+0.1	0.6	0.6	0.5	0.6	+0.1	0.1	*	*	0.1	0.0
12th Grade	2.1	2.1	2.0	2.4	+0.4	1.4	1.1	1.2	1.3	+0.1	0.8	0.6	0.7	0.9	+0.2	0.1	0.1	0.1	0.4	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.7	1.9	1.5	1.3	-0.2	0.5	0.4	0.3	0.4	+0.1	0.2	0.1	0.0	0.1	+0.1	0.0	0.1	0.0	0.0	0.0

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Footnotes are on next page)

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NOTES: Level of significance of difference between the two years: s = .05, ss = .01, sss = .001. '—' indicates data not available. '*' indicates less than .05 percent. Any apparent inconsistency between the change estimate and the prevalence estimates for the two years is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

Approximate Weighted Ns	1991	1992	1993	1994
8th Graders	17,500	18,600	18,300	17,300
10th Graders	14,800	14,800	15,300	15,800
12th Graders	15,000	15,800	16,300	15,400
College Students	1,410	1,490	1,490	1,410
Young Adults	6,600	6,800	6,700	6,500

[a] For 12th graders: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders: The use of other opiates and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] For 12th graders, college students, and young adults only: Data based on five questionnaire forms; N is five-sixths of N indicated for 12th graders. In 1994, N for college students is 1,200 and N for young adults is 5,300.

[c] Inhalants are unadjusted for underreporting of amyl and butyl nitrites; hallucinogens are unadjusted for underreporting of PCP.

[d] For 8th, 10th, and 12th graders, and young adults only: Data based on a single questionnaire form; N for 12th graders is one-sixth of N indicated. N for 8th and 10th graders is one-half of N indicated. In 1994, N for young adults is 1,200.

[e] For 12th graders, college students, and young adults only: Data based on four questionnaire forms; N is four-sixths of N indicated for 12th graders. In 1994, N for college students is 1,000 and N for young adults is 4,200.

[f] For 12th graders, college students, and young adults only: Data based on two questionnaire forms; N is one-third of N indicated for 12th graders. In 1994, N for college students is 500 and N for young adults is 2,400.

[g] Only drug use which was not under a doctor's orders is included here.

[h] For all grades/populations: In 1993, the question text was changed slightly in half of the forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on one of two questionnaire forms for the 8th and 10th graders and on three of six questionnaire forms for the 12th graders, college students, and young adults. N is one-half of N indicated for all groups. In 1994, data were based on all forms for all grades.

[i] For 12th graders only: Data based on two questionnaire forms; N is one-third of N indicated. For young adults only: Data based on one questionnaire form. In 1994, N is 1,200.

taking for granted" (page 7). The use of illicit drugs again rose sharply in 1994 in all three grade levels as negative attitudes and beliefs about them eroded further.

- ***Marijuana*** use rose sharply in all three grade levels in 1994, the third year of increase for eighth graders and the second for tenth and twelfth graders. Over these intervals the annual use of marijuana (i.e., any use during the prior twelve months) doubled among eighth graders (to 13%), increased by two-thirds among tenth graders (to 25%), and grew by two-fifths among twelfth graders (to 31%). Among college students and young adults, the increase from 1991 or 1992 has been much more gradual.

  Daily marijuana use rose significantly in all three grade levels in 1994, reaching 3.6% among seniors; that is one in every 28 students or more than one per average classroom. Still, this rate is far below the 10.7% peak figure reached in 1978.

- Among seniors, the proportions using ***any illicit drug other than marijuana*** in the past year rose from 17% to 18%, a rate still substantially below the 34% peak rate in 1981. There was little change for college students (12%) or young adults (13%).

- In 1989-1991 we noted an increase among college students and young adults in the use of ***LSD***, a drug most popular in the late 1960s and early 1970s. In 1992, all five populations showed an increase in annual prevalence of LSD, and since then increases have persisted among the secondary school students. The 1989-1992 increase for college students (from 3.4% to 5.7%), and for young adults (from 2.7% to 4.3%) ended in 1993, but there were increases again in 1994 for both groups.

  Prior to the significant increase in use among seniors in 1993, there was a significant 4.3% decline, then a continued, nonsignificant, decline through 1994 in the proportion seeing great risk associated with trying LSD. The decline beginning in 1992 in the proportion disapproving LSD also continued through 1994. The change in disapproval between 1993 and 1994 was significant. Since LSD was one of the earliest drugs popularly used in the overall American drug epidemic, there is a distinct possibility that young people—particularly the youngest cohorts, like the eighth graders—are not as concerned about the risks of use. They have had less opportunity to learn vicariously about the consequences of use by observing others around them, or to learn from intense media coverage of the issue. This type of "generational forgetting" could set the stage for a whole new epidemic of use. There has, in fact, been a decline in the perceived harmfulness of LSD, which began after 1991 among seniors. These measures were first introduced for eighth and tenth graders in 1993, but they showed a sharp drop in 1994.

- Prescription-controlled ***stimulants***—one of the most widely used classes of drugs taken illicitly (i.e., outside of medical regimen)—also showed evidence of a continued increase in 1994, with annual and 30-day prevalence rates gradually increasing among the three secondary school samples. Annual prevalence had fallen from 20% in 1982 to 7% in 1992 among seniors and from 21% to 4% among college students over the same interval. The increase in use among seniors beginning in 1993 followed a sharp drop in perceived risk a year earlier. In 1994, perceived risk and disapproval of amphetamine use continued to decline. This pattern of change is consistent with our theoretical position that perceived risk can drive both use and disapproval.

- The ***inhalants*** constitute another class of abusable substance where a troublesome increase continued in 1994. Inhalants are defined as fumes or gases which are inhaled to get high, including common household substances such as glues, aerosols, butane, and solvents. One class of inhalants, ***amyl and butyl nitrites***, became somewhat popular in the late 1970s, but their use has been almost eliminated. For example, annual prevalence among twelfth grade students was 6.5% in 1979 but 1.1% in 1994.

  When the nitrites are removed from consideration it appears that all other inhalants taken together have had an upward trend in use, from 3.0% among seniors in 1976 to 7.7% in 1994. The three secondary school populations showed a modest increase in inhalant use in 1994. Some 12% of the 1994 eighth graders and 9% of the tenth graders indicated use in the prior 12 months, making inhalants the second most widely used class of illicitly used drugs for eighth graders (after marijuana) and the third most widely used (after marijuana and stimulants) for the tenth graders. Inhalants can and do cause death, and tragically, this often occurs among youngsters in their early teens.

- The overall prevalence of ***crack*** cocaine levelled in 1987 at relatively low prevalence rates, at least within these populations, even though crack use continued to spread to new communities. In 1994, annual prevalence rose slightly (not significantly) to 1.9% for seniors (down from 3.9% in 1987). A similar increase among eighth and tenth grade students did reach statistical significance. Among young adults one to ten years past high school, annual prevalence was 1.1%, but only 0.5% among college students–both relatively unchanged since 1991. In high school, annual crack prevalence among the college-bound is lower than among those not bound for college (1.4% vs. 3.3%). There is now rather little regional variation in crack use.

We believe that the particularly intense and early media coverage of the hazards of crack cocaine likely had the effect of "capping" an epidemic early by deterring many would-be users and by motivating many experimenters to desist use. While 3.0% of seniors report ever having tried crack, only 0.8% report use in the past month, indicating noncontinuation by 73% of those who try it. The longer-term downward trend can be explained by lower initiation rates among students and by higher noncontinuation rates.

While crack use did not increase in 1993, perceived risk and disapproval dropped in all three grade levels, predicting the modest rise in use in all three grades in 1994.

- ***Cocaine***[5] in general began to decline a year earlier than crack. Between 1986 and 1987 the annual prevalence rate dropped dramatically, by roughly two-tenths in all three populations then studied–seniors, college students, and young adults. The decline occurred when young people began to view experimental and occasional use–the type of use they are most likely to engage in–as more dangerous. This change had occurred by 1987, probably partly because the hazards of cocaine use received extensive media coverage in the preceding year, but almost surely in part because of the cocaine-related deaths in 1986 of sports stars Len Bias and Don Rogers.

In 1992, this broad decline continued, with annual prevalence falling by nonstatistically significant amounts in all populations *except* eighth graders, who actually showed a statistically significant increase in use. Annual prevalence of cocaine use fell by about two-thirds among the three populations for which long-term data are available. In 1993, cocaine use remained stable in all five populations except the young adults, where use continued to decline. In 1994, annual use rose among eighth, tenth, and twelfth graders while use among college students and young adults continued to decline. Again, the story regarding attitudes and beliefs is more troubling.

Having risen substantially since 1986, the perceived risk of using cocaine actually showed some (nonsignificant) decline in 1992 among seniors. In 1993, perceived risk for cocaine other than crack fell sharply in all grades and disapproval began to decline in all grades, though not as sharply as perceived risk. In 1994, perceived risk continued to decline among eighth and tenth graders (significantly among eighth graders); however it rose slightly among seniors. Disapproval continued its decline among eighth and tenth graders (significantly in both cases). Again, seniors did not follow.

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[5] Unless otherwise specified, all references to "cocaine" refer to the use of cocaine in any form, including crack.

Through 1989, there was no decline in perceived availability of cocaine; in fact, it rose steadily after 1984 suggesting that availability played no role in bringing about the substantial downturn in use. After 1989, however, perceived availability has fallen some among seniors; the decline may be explained by the greatly reduced proportions of seniors who say they have any friends who use, because friendship circles are an important part of the supply system. In 1992 there was a significant increase in eighth tenth grade reports of the availability of crack and other cocaine, but no significant change thereafter. Among seniors, on the other hand, reported availability continued to decline.

As with all the illicit drugs, lifetime cocaine prevalence climbs with age, exceeding 25% by age 28. Unlike all of the other illicit drugs, active use–i.e., annual prevalence or monthly prevalence–also climbs after high school.

- ***PCP*** use fell sharply among high school seniors between 1979 and 1982, from an annual prevalence of 7.0% to 2.2%. It reached a low point of 1.2% in 1988 and stands at 1.6% in 1994. For the young adults, the annual prevalence rate is now only 0.3%.

- The annual prevalence of ***heroin*** use has been very steady since 1979 among seniors at 0.4% to 0.6%, down from 1.0% in 1975. It stands at 0.6% in 1994. Heroin statistics for young adults and college students have also remained quite stable at low rates (about 0.1% to 0.2%). Eighth and tenth graders have an annual prevalence of 1.2% and 0.9% respectively, slightly higher than twelfth graders (0.6%); the higher rates probably reflect the eventual dropouts, who are captured in the lower grades but not in twelfth grade. Eighth graders show a significant increase in the annual prevalence of heroin, from 0.7% in 1993 to 1.2% in 1994.

- The use of ***opiates other than heroin*** had been fairly level over most of the life of the study. Seniors had an annual prevalence rate of 4% to 6% from 1975 to 1990. In 1991, however, a significant decline (from 4.5% to 3.5%) was observed, though no further changes have occurred. Young adults in their twenties have generally shown a very gradual decline from 3.1% in 1986 to 2.5% in 1994; college students have likewise shown a slow decrease, from 3.8% in 1982-1984 to 2.4% in 1994. Data are not reported for younger grade levels because we believe the students are not accurately discriminating among the drugs which should be included or excluded from this class.

- A long and substantial decline, which began in 1977, occurred for ***tranquilizer*** use among high school seniors. By 1992 annual prevalence reached 2.8% compared to 11% in 1977, but there was a significant increase in 1993 to 3.5%, and a slight further increase to 3.7% in 1994. Reported tranquilizer use also has shown some recent, modest increase among eighth graders, from 1.8% in 1991 to 2.4% in 1994, but not among tenth graders, whose annual prevalence stands at 3.3% in 1994. For the young adult sample, annual prevalence has now declined to 2.9% and for the college student sample to 1.8%.

- The long-term gradual decline in ***barbiturate*** use, which began at least as early as 1975, when the study began, halted in 1988. Annual prevalence among seniors fell from 10.7% in 1975 to 3.2% in 1988, and then hovered around 3.4% through 1991 before dropping further to 2.8% in 1992. It has since risen significantly to 4.1% in 1994. Annual prevalence of this class of sedative drugs is lower among the young adult sample (1.8%), and lower still among college students specifically (1.2%). For these groups there has been little further change since 1988. Again, data are not included here for lower grades because we believe the younger students have more problems with the proper classification of relevant drugs.

- ***Methaqualone***, another sedative drug, has shown quite a different trend pattern than barbiturates. Its use rose steadily among seniors from 1975 to 1981, when annual prevalence reached 8%. It then fell rather sharply to 0.2% by 1993 and rose significantly to 0.8% in 1994. Use also fell among all young adults and among college students, which had annual prevalence rates of only 0.3% and 0.2%, respectively in 1989–the last year in which they were asked about this drug. In the late eighties, shrinking availability may well have played a role in this drop, as legal manufacture and distribution of the drug ceased. Because of its very low usage rates, only the seniors are now asked about their use of this drug.

- In sum, five classes of illicitly used drugs, ***marijuana***, ***cocaine***, ***stimulants***, ***LSD***, and ***inhalants*** have had an impact on appreciable proportions of young Americans in their late teens and twenties. In 1994, high school seniors showed annual prevalence rates of 31%, 4%, 9%, 7%, and 8%, respectively. Among college students in 1994, the comparable annual prevalence rates are 29%, 2%, 4%, 5%, and 3%; and for all high school graduates one to ten years past high school (young adults) the rates are 26%, 4%, 5%, 4%, and 2%. It is worth noting that LSD has climbed in the rankings because its use has not declined, or in some cases has increased, during a period in which use of cocaine, amphetamines, and other drugs has declined appreciably. The inhalants have become relatively more important for similar reasons.

  Clearly, cocaine is relatively more important in the older age group and inhalants are relatively more important in the younger ones. In fact, in eighth grade inhalants are second to marijuana as the most widely used of the illicit drugs.

Because of their importance among the younger adolescents, a new index of illicit drug use including inhalants was introduced in Table 1. Certainly the use of inhalants reflects a form of illicit, psychoactive drug use; its inclusion makes relatively little difference in the illicit drug index prevalence rates for the older age groups, but considerable difference for the younger ones. For example, the proportion of eighth graders reporting any illicit drug used in their lifetime, exclusive of inhalants, in 1994 is 26%, whereas 35% have such experience if inhalants are included.

- The annual prevalence among seniors of over-the-counter ***stay-awake pills***, which usually contain caffeine as their active ingredient, nearly doubled between 1982 and 1990, increasing from 12% to 23%. Since 1990 this statistic has fallen slightly to 21% in 1994. Increases also occurred among the college-age young adult population (ages 19-22), where annual prevalence was 26% in 1989, but is now down to 18% in 1994.

  The other two classes of nonprescription stimulants–the ***look-alikes*** and the over-the-counter ***diet pills***–have also shown some fall-off among seniors in recent years. Still, among seniors some 24% of the females have tried diet pills by the end of senior year, 15% have used them in the past year, and 6% in just the past month. These numbers reflect some increase in 1994.

College-Noncollege Differences in Illicit Drug Use

- American college students (defined here as those respondents one to four years past high school who were actively enrolled full-time in a two- or four-year college) show annual usage rates for a number of drugs which are about average for their age group, including ***any illicit drug***, ***marijuana*** specifically (although their rate of ***daily marijuana use*** is about one-half what it is for the rest of their age group, i.e., 1.8% vs. 4.0%), ***hallucinogens***, ***heroin***, ***LSD***, and ***opiates other than heroin***. For several categories of drugs, however, college students have rates of use which are below those of their age peers, including ***any illicit drug other than marijuana***, ***cocaine***, ***crack*** cocaine specifically, ***MDMA***, ***tranquilizers***, and ***barbiturates***.

  Since college-bound seniors had below average rates of use on all of these illicit drugs while they were in high school, the eventual attainment of parity on many of them reflects some closure of the gap. As results from the study published elsewhere have shown, this college effect of "catching up" is largely explainable in terms of differential rates of leaving the parental home and of getting married. College students are more likely than their age peers to have left the parental home and its constraining influences and less likely to have entered marriage, with its constraining influences.

- In general, the trends since 1980 in illicit substance use among American college students have parallelled those of their age peers not in college. Most drugs have shown a decline in use since then. Further, all young adult high school graduates through age 28, as well as college students taken separately, show trends which are highly parallel for the most part to the trends among high school seniors, although declines in the active use of many of the drugs have been proportionately larger in these two older populations. In 1993 and 1994, this general parallel in trends was not evident, however; the upturn seen among the secondary school students has not been replicated in the post-high school population.

Male-Female Differences in Illicit Drug Use

- Regarding sex differences in three populations (seniors, college students, and young adults), males are more likely to use ***most illicit drugs***, and the differences tend to be largest at the higher frequency levels. ***Daily marijuana use*** among high school seniors in 1994, for example, is reported by 5.1% of males vs. 2.0% of females; among all young adults by 4.5% of males vs. 1.4% of females; and among college students, specifically, by 3.3% of males vs. 0.8% of females. The only significant exception to the rule that males are more frequently users of illicit drugs than females occurs for ***stimulant*** use in high school, where females are at the same level or slightly higher.

- In the eighth and tenth grade samples there are fewer sex differences in the use of drugs–perhaps because the girls tend to date older boys who are in age groups considerably more likely to use drugs. There is little male-female difference in eighth and tenth grades in the use of ***inhalants***, ***cocaine***, and ***crack***. As with the older age groups, ***stimulant*** use is slightly higher among females.

TRENDS IN ALCOHOL USE

- Several findings about ***alcohol*** use in these age groups are noteworthy. First, despite the fact that it is illegal for virtually all secondary school students and most college students to purchase alcoholic beverages, experience with alcohol is almost universal among them. That is, 56% of eighth graders have tried it, 71% of tenth graders, 80% of twelfth graders, and 88% of college students, and active use is widespread.

Most important, perhaps, is the widespread occurrence of occasions of heavy drinking—measured by the percent reporting five or more drinks in a row at least once in the prior two-week period. Among eighth graders this statistic stands at 15%, among tenth graders at 24%, among twelfth graders at 28%, and among college students at 40%. After the early twenties this behavior recedes somewhat, reflected by the 34% found in the entire young adult sample.

- Alcohol use did not increase as use of other illicit drugs decreased among seniors, although it was common to hear such a "displacement hypothesis" asserted. If anything, the opposite seems to be true. Since 1980, the monthly prevalence of alcohol use among seniors has gradually declined, from 72% in 1980 to 51% in 1993. ***Daily use*** declined from a peak of 6.9% in 1979 to 2.5% in 1993; and the prevalence of drinking ***five or more drinks in a row*** (binge drinking) during the prior two-week interval fell from 41% in 1983 to 28% in 1993–nearly a one-third decline. Now that illicit drug use is starting up again, there is evidence that alcohol use may be starting up, as well.

  In 1994 there were no statistically significant changes in any of the populations in the prevalence of drinking. All grades showed a positive change on annual, 30-day, and binge drinking prevalence rates, however.

College-Noncollege Differences in Alcohol Use

- The data from college students show a quite different pattern in relation to alcohol use. They show less drop-off in monthly prevalence since 1980 (82% to 72% in 1993) and slightly less decline in ***daily use*** (6.5% in 1980 to 3.2% in 1993). There has also been little change in ***occasions of heavy drinking***, which was at 40% in 1993—considerably higher than the 28% among high school seniors. Since both their noncollege-age peers and high school students have been showing a net decrease in occasions of heavy drinking since 1980, the college students stand out as having maintained a very high rate of binge or party drinking. Since the college-bound seniors in high school are consistently less likely to report occasions of heavy drinking than the noncollege-bound, this indicates that they are "catching up and passing" their peers in binge drinking after high school.

- In most surveys from 1980 onward, college students have had a ***daily drinking*** rate which was slightly lower than that of their age peers (though this was not true in 1994), suggesting that they were more likely to confine their drinking to weekends, when they tend to drink a lot. Again, college men have much higher rates of daily drinking than college women: 5.6% vs. 2.1% in 1994. The rate of daily drinking has fallen considerably among the noncollege group, from 8.7% in 1981 to 3.2% in 1994.

Male-Female Differences in Alcohol Use

- There is a substantial sex difference among high school seniors in the prevalence of ***occasions of heavy drinking*** (20% for females vs. 37% for males in 1994); this difference generally had been diminishing very gradually since the study began, though it expanded slightly in 1994.

- There are also substantial sex differences in alcohol use among college students, and young adults generally, with males drinking more. For example, 52% of college males report having ***five or more drinks in a row*** over the previous two weeks vs. 31% of college females. There has been little change in this gender difference between 1980 and 1994.

TRENDS IN CIGARETTE SMOKING

- A number of important findings about ***cigarette smoking*** among American adolescents and young adults have emerged from the study. Despite the demonstrated health risks associated with smoking, sizeable proportions of young people still are establishing regular cigarette habits during late adolescence. In fact, since the study began in 1975, cigarettes have consistently comprised the class of substance most frequently used on a daily basis by high school students.

- At present we are in a period of clear and continuing increase in cigarette smoking among teens. Twelfth graders have shown an increase in smoking which began in 1992, while eighth and tenth graders have shown a steady increase since they were first surveyed in 1991. Their rates of current smoking–that is, smoking any cigarettes in the prior 30 days–rose among eighth graders by 30% between 1991 and 1994, from 14.3% to 18.6%. Tenth graders' current smoking rates incresed by more than two-tenths over the same interval, from 20.8% to 25.4%. Among seniors the current smoking rate has risen one-eighth since 1992, from 27.8% to 31.2%. (All three changes are highly statistically significant.)

- For seniors, this upturn follows a substantial decline in smoking during the period from 1977 to 1981, a leveling for nearly a decade (through 1990) and a slight decline in 1991 and 1992.

- The dangers perceived to be associated with pack-a-day smoking differ greatly by grade level and seem to be unrealistically low at all grade levels. Only two-thirds of the seniors (67.6%) report that a pack-a-day smokers run a great risk of harming themselves and only half (50.8%)

of the eighth graders say the same. All three grades showed a nonsignificant decrease in perceived risk in 1994. Disapproval of cigarette smoking has been in decline longer: since 1991 among eighth and tenth graders and since 1992 among twelfth graders.

Age and Cohort-Related Differences in Cigarette Smoking

- Initiation of daily smoking most often occurs in grades 6 through 9 (i.e., at modal ages 11-12 to 14-15), with rather little further initiation after high school, although a number of light smokers make the transition to heavy smoking in the first two years after high school. Analyses presented in this volume and elsewhere have shown that cigarette smoking shows a clear "cohort effect." That is, if a class (or birth) cohort establishes an unusually high rate of smoking at an early age relative to other cohorts, it is likely to remain high throughout the life cycle.

- As we reported in the "Other Findings from the Study" chapter in the 1986 volume in this series, some 53% of the half-pack-a-day (or more) smokers in senior year said that they had tried to quit smoking and found they could not. (The figure was 56% in 1994.) Of those who were daily smokers in high school, nearly three-quarters were daily smokers 7 to 9 years later (based on the 1985 survey), despite the fact that in high school only 5% of them thought they would "definitely" be smoking 5 years hence. Clearly, the smoking habit is established at an early age; it is difficult to break for those young people who have it; and young people greatly overrate their own ability to quit. Additional data from the eighth and tenth grade students added to the study more recently, show us that younger children are even more likely than older ones to underestimate the dangers of smoking.

- The surveys of eighth and tenth graders also show that cigarettes are almost universally available to teens. Three-quarters of eighth graders and 90% of tenth graders say that cigarettes are "fairly easy" or "very easy" for them to get, if they want them.

College-Noncollege Differences in Cigarette Smoking

- A striking difference in smoking rates exists between college-bound and noncollege-bound high school seniors. For example, smoking half-pack or more a day is more than twice as prevalent among the noncollege-bound seniors (20% vs. 8%). Among respondents one to four years past high school, those not in college show the same dramatically higher rate of smoking compared to that found among those who are in college, with half-pack-a-day smoking standing at 22% and 8%, respectively.

Male-Female Differences in Cigarette Smoking

- Since 1980, among college students, females have had slightly higher probabilities of being daily smokers. This long-standing sex difference has not been true of their age peers who are not in college.

  In the 1970s, among high school seniors, females caught up to, and passed, males in their rates of ***current smoking***. Both sexes then showed a decline in use followed by a long, fairly level period with use by females consistently higher. In 1990 there was another crossover due to a rising rate among males (from 1987 to 1994) and a falling rate among females (from 1987 to 1992) resulting in males having a higher rate from 1991 to 1994. Both sexes have shown increasing use since 1992.

RACIAL/ETHNIC COMPARISONS

The three largest ethnic groupings–whites, blacks, and Hispanics taken as a group–are examined here. (Sample size limitations simply do not allow finer subgroup breakdowns unless many years are combined.) A number of interesting findings emerge in these comparisons, and the reader is referred to Chapters 4 and 5 for a full discussion of them.

- Black seniors have consistently shown lower usage rates on most drugs, licit and illicit, than white students; this also is true at the lower grade levels. In some cases, the differences are quite large.

- Black students have a much lower prevalence of ***daily cigarette smoking*** than white students (5% vs. 23% in senior year, in 1994) because their smoking rate continued to decline after 1983, while the rate for whites stabilized.

- In twelfth grade, ***binge drinking*** is much less likely to be reported by black students (14%) than by white (32%) or Hispanic students (24%).

- In twelfth grade, of the three racial/ethnic groups, whites have the highest rates of use on a number of drugs, including ***marijuana, inhalants, hallucinogens, LSD*** specifically, ***barbiturates, amphetamines, tranquilizers, opiates other than heroin***, ***alcohol***, ***cigarettes***, and ***smokeless tobacco***.

- However, in senior year, Hispanics have the highest usage rate for a number of the most dangerous drugs: ***cocaine, crack,*** and ***other cocaine***; and they tie whites on ***heroin*** use. Further, in eighth grade, Hispanics have the highest rates not only on these drugs, but on many of the others, as well. For example, in eighth grade, the lifetime prevalence for Hispanics is 23%, and for whites and blacks 13% for

marijuana; 6%, 4%, and 1% for ***hallucinogens***; 54%, 46%, and 37% for ***cigarettes***; 22%, 13%, and 12% for ***binge drinking***; etc. In other words, Hispanics have the highest rates of use for nearly all drugs in eighth grade, but not in twelfth, which suggests that their considerably higher dropout rate (compared to whites and blacks) may change their relative ranking by twelfth grade.

- With regard to trends, seniors in all three racial/ethnic groups exhibited the recent decline in ***cocaine*** use through 1992, although the decline was less steep among black seniors because the earlier increase in use was not as large as that among whites and Hispanics.
- For virtually ***all of the illicit drugs***, the three groups have tended to trend in parallel. Because white seniors had achieved the highest level of use on a number of drugs—including ***stimulants, barbiturates, methaqualone***, and ***tranquilizers***—they also had the largest declines; blacks have had the lowest rates, and therefore, the smallest declines.
- During the life of the study, important racial/ethnic differences in ***cigarette smoking*** have emerged among seniors. The three groups were fairly similar in their smoking rates during the late 1970s and all three mirrored the general decline in smoking from 1977-1981. Since 1981, however, a considerable divergence has emerged: Through 1992, smoking rates declined very little, if at all, for whites and Hispanics, but the rates for blacks continued to decline steadily. As a result, by 1992 the daily smoking rate for blacks was one-fifth that for whites. By 1994, both blacks and whites showed an increase in smoking, however, and in all three grade levels. Hispanics also showed an increase in eighth grade, but not in tenth and twelfth grades by 1994.

DRUG USE IN EIGHTH GRADE

It may be useful to focus specifically on the youngest age group in the study–the eighth graders–who are about 13 to 14 years old, because the exceptional level of use that they already have attained helps illustrate the urgent need for the nation to continue to address the problems of substance abuse among its young.

- By eighth grade 56% of youngsters report having tried ***alcohol*** (more than just a few sips) and more than a quarter (26%) say they have already been drunk at least once.
- Nearly half of the eighth graders (46%) have tried ***cigarettes***, and 19%, or nearly one in five, say they have smoked in the prior month. Only 51% say they think there is great risk associated with being a pack-a-day smoker.

- ***Smokeless tobacco*** has been tried by 30% of the male eighth graders, is used currently by 13% of them, and is used daily by 3.2%. Rates are far lower among the female eighth graders.

- Among eighth graders, one in five (20%) have used ***inhalants***, and 6% say they have used in the past month. This is the only class of drugs for which use is substantially higher in eighth grade than in tenth or twelfth grade.

- ***Marijuana*** has been tried by one in every six eighth graders (17%), and has been used in the prior month by 7.8%, and these numbers are rising rapidly.

- A surprisingly large number of eighth grade students say they have tried prescription-type ***stimulants*** (12%); 3.6% say they have used them in the prior 30 days.

- Relatively few eighth graders say they have tried most of the other illicit drugs yet. (This is consistent with the retrospective reports from seniors.) But the proportions having at least some experience with them still is not inconsequential when one considers the fact that a 3.3% prevalence rate represent one child in every 30-student classroom on average: ***tranquilizers*** (4.6%), ***LSD*** (3.7%), ***other hallucinogens*** (2.2%), ***crack*** (2.4%), ***other cocaine*** (3.0%), ***heroin*** (2.0%), and ***steroids*** (2.0% overall, and 2.8% among males.)

- The very large numbers who have already begun use of the so-called "gateway drugs" (***tobacco***, ***alcohol***, ***inhalants***, and ***marijuana***) suggests that a substantial number of eighth grade students are already at risk of proceeding further to such drugs as LSD, cocaine, amphetamines, and heroin.

SUMMARY AND CONCLUSIONS

To summarize the findings on trends, over the decade of the eighties there were appreciable declines in the use of a number of the ***illicit drugs*** among seniors, and even larger declines in their use among American college students and young adults. These substantial improvements–which seem largely explainable in terms of changes in attitudes, beliefs about risk of drugs, and peer norms against drug use–have some extremely important policy implications. One is that the nation does have the capacity to deal quite effectively with the drug problem. It has done it before. The second is that demand-side factors appear to have been pivotal in bringing about those changes. The availability of marijuana, as reported by high school seniors, has held fairly steady throughout the life of the study. (Moreover, abstainers and quitters rank availability and price very low on their list of reasons for not using.) And the perceived availability of cocaine actually was rising during the beginning of the sharp decline in cocaine and crack use.

However, as we have previously warned, the stall in these favorable trends in all three populations in 1985, as well as an increase in active ***cocaine*** use that year, should have served as a reminder that the improvements were not inevitable and should not be taken for granted. Further, during the 1980s, the use of ***inhalants*** other than the nitrites continued to rise.

While the general decline resumed in 1986 and, most importantly, was joined by the start of a decline in ***cocaine*** use in 1987 and ***crack*** use in 1988, in 1992 a number of alarm bells sounded. While the seniors continued to show improvement on a number of measures in 1992, the college students and young adults did not. Further, the attitudes and beliefs of seniors regarding drug use began to soften. Perhaps of greatest importance, the eighth graders exhibited a significant increase in use of ***marijuana, cocaine, LSD***, and ***hallucinogens other than LSD*** that year, as well as a not-quite significant increase in ***inhalant*** use. (In fact, all five populations showed some increase on ***LSD***, continuing a longer term trend for college students and young adults.)

In 1993 and again in 1994, still more alarm bells sounded. Eighth graders continued to show an increase in their use of a number of drugs, and the tenth graders and twelfth graders joined them, fulfilling predictions based on eroding beliefs and attitudes. Increases occurred in a number of the so-called "gateway drugs"–***marijuana, cigarettes,*** and ***inhalants***—which may bode ill for the use of later drugs in the usual sequence of drug-use involvement. The softening attitudes about ***crack*** and other forms of ***cocaine*** also provided a basis for concern.

This study has demonstrated over the years that changes in perceived risk and disapproval have been important causes of change in the use of a number of drugs. These beliefs and attitudes surely are influenced by the amount and nature of the public attention being paid to the drug issue. A substantial decline in attention to this issue in the past few years may help explain why the increases in perceived risk and disapproval among students ceased, and backsliding began.

We seem to be seeing the beginning of a turnaround in the drug abuse situation more generally among our youngest cohorts–perhaps because they have not had the same opportunities for vicarious learning from the adverse drug experiences of people around them and people they learn about through the media. Clearly there was a danger that, as the drug epidemic subsided considerably, newer cohorts would have far less opportunity to learn through informal means about the dangers of drugs. This may mean that the nation must redouble its efforts to be sure that they learn these lessons through more formal means–from schools, parents, and focused messages in the media, for example–and that this more formalized prevention effort become institutionalized so that it will endure for the long term. Clearly, for the foreseeable future, American young people will be aware of the psychoactive potential of a host of drugs and will have access to them. That means that each new generation of young people must learn why they should not use drugs. Otherwise their natural curiosity and desires for new experiences will lead a great many of them to use.

The following facts help to put into perspective the magnitude and variety of substance use problems which remain among American young people at the present time:

- By the end of eighth grade, one-third (35%) of American secondary school students have tried an ***illicit drug*** (if inhalants are included as an illicit drug). More than two-fifths of tenth graders have done so (43%), and about one-half of twelfth graders (49%).

- By their late twenties, over 70% of today's American young adults today have tried an ***illicit drug***, including nearly half (47%) who have tried some ***illicit drug other than*** (usually in addition to) ***marijuana***. (These figures do not include inhalants.)

- About one-third of young Americans have tried ***cocaine*** by the age of 30, and 6% have tried it by age eighteen, their senior year of high school. One in every thirty-three seniors (3.0%) have tried the particularly dangerous form of cocaine called ***crack***: in the young adult sample one in twenty-three (4.4%) have tried it.

- Roughly one in thirty (3.6%) high school seniors in 1994 smoked ***marijuana daily***. Among young adults aged 19 to 28, the percent is slightly less (2.8%). Among seniors in 1994, one in nine (11.3%) had ever been daily marijuana smokers at some time for at least a month, and among young adults the comparable figure is 12.4%.

- Some 28% of seniors had consumed ***five or more drinks in a row*** at least once in the two weeks prior to the survey, and such behavior tends to increase among young adults one to four years past high school. The prevalence of such behavior among male college students reaches 52%.

- Some 31% of seniors in 1994 were current ***cigarette*** smokers and 19% already were current daily smokers; these numbers are rising among seniors, and rising even faster among the youger students. In addition, many of the lighter smokers will convert to heavy smoking after high school.

- Despite the improvements between 1979 and 1991, it is still true that this nation's secondary school students and young adults show a level of involvement with illicit drugs which is greater than has been documented in any other industrialized nation in the world. Even by longer-term historical standards in this country, these rates remain extremely high. Heavy drinking also remains widespread and troublesome; and certainly the continuing initiation of a large and growing proportion of young people to cigarette smoking is a matter of the greatest public health concern.

- Finally, we note the seemingly unending capacity of pharmacological experts and amateurs to discover new substances with abuse potential that can be used to alter mood and consciousness, as well the potential for our young people to "discover" the abuse potential of existing products, like Robitussin™, and to "rediscover" older drugs, such as LSD. While as a society we have made significant progress on a number of fronts in the fight against drug abuse, we must remain vigilant against the opening of new fronts, as well as the re-emergence of trouble on older ones. The recent rise in illicit drug use and in cigarette smoking, both of which began in the early 1980s, certainly suggests that we have not been sufficiently vigilant and/or effective.

- The drug problem is not an enemy which can be vanquished, as in a war. It is more a recurring and relapsing problem which must be contained to the extent possible on a long term, ongoing basis; and, therefore, it is a problem which requires an ongoing, dynamic response from our society–one which takes into account the continuing generational replacement of our children and the generational forgetting which can occur with that replacement.

Chapter 3

STUDY DESIGN AND PROCEDURES

The research design, sampling plans, and field procedures used in both the in-school surveys of the eighth, tenth, and twelfth grade students, and the follow-up surveys of young adults are presented in this chapter. Related methodological issues such as response rates, population coverage, and the validity of the measures are also discussed. We begin with a description of the design which has been used consistently over 20 years to survey high school seniors; then the much more recently instituted design for eighth and tenth graders is described. Finally, the designs for the *follow-up* surveys of former twelfth graders, and former eighth and tenth graders, are covered.[6]

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF SENIORS

The data from high school seniors are collected during the spring of each year; data collection began with the class of 1975. Each year's data collection takes place in approximately 125 to 140 public and private high schools selected to provide an accurate representative cross-section of high school seniors throughout the coterminous United States (see Figure 1).

The population under study. There are several reasons for choosing the senior year of high school as an optimal point for monitoring the drug use and related attitudes of youth. First, the completion of high school represents the end of an important developmental stage in this society, since it demarcates both the end of universal public education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two environments on American youth. Further, the completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences so senior year represents a good time at which to take a "before" measure upon which to calculate changes which may be attributable to the many environmental and role transitions which occur in young adulthood. Finally, there are some important practical advantages to building a system of data collections around samples of high school seniors. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable stress be laid on cost efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

The omission of dropouts. One limitation in the original study design had been the exclusion of those young men and women who drop out of high school before graduation–between 15 and 20 percent of each age cohort nationally, according to U.S. Census statistics. Clearly, the omission of high school dropouts introduces biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the

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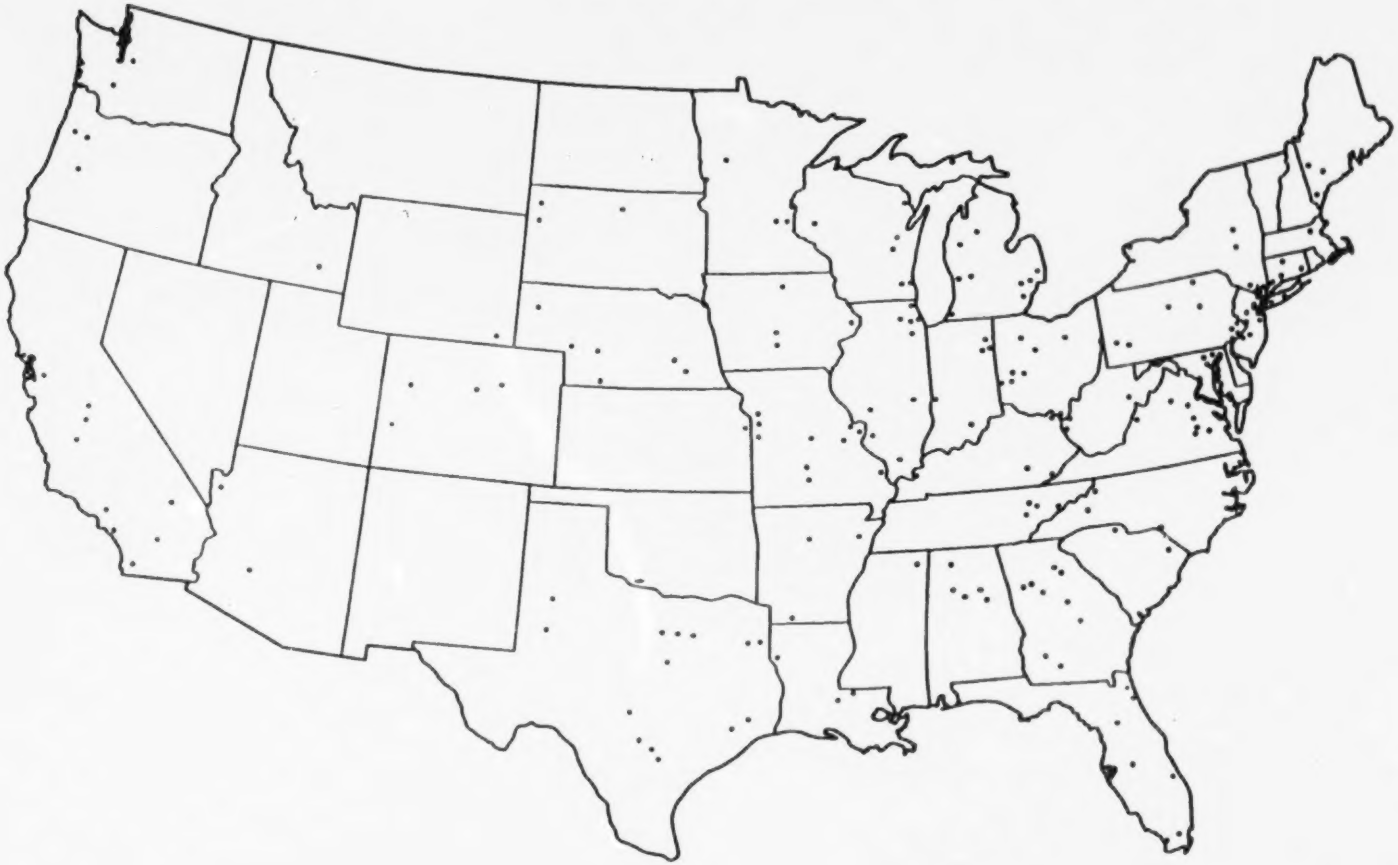
[6] For a more detailed description of the study design, see Bachman, J.G., Johnston, L.D., & O'Malley, P.M. (1991). *Monitoring the Future project after seventeen years: Design and procedures.* (Monitoring the Future Occasional Paper 33.) Ann Arbor, MI: Institute for Social Research.

FIGURE 1

Counties Included in One Year's Data Collection



NOTE: Counties may contain multiple schools and up to three grade levels each.

small proportion of dropouts sets outer limits on the bias. Further, since the bias from missing dropouts should remain just about constant from year to year, their omission should introduce little or no bias in *change* estimates. Indeed, we believe the changes observed over time for those who finish high school are likely to parallel the changes for dropouts in most instances. An Appendix to this volume addresses the likely effects of the exclusion of dropouts on estimates of prevalence of drug use and trends in drug use among the entire age cohort; the reader is referred there for a more detailed discussion of this issue. Also, as follow-up surveys conducted by mail of the eighth and tenth grade respondents provide data from prospectively defined panels of dropouts, we hope to be able to make direct estimates of the extent to which their omission from the senior samples causes an underestimate for the age group as a whole.

Sampling procedures. A multi-stage random sampling procedure is used for securing the nationwide sample of high school seniors each year. Stage 1 is the selection of particular geographic areas, Stage 2 the selection (with probability proportionate to size) of one or more high schools in each area, and Stage 3 the selection of seniors within each high school. Within each school, up to about 350 seniors may be included. In schools with fewer seniors, the usual procedure is to include all of them in the data collection. In larger schools, a subset of seniors is selected either by randomly sampling entire classrooms or by some other random method that is judged to be unbiased. This three-stage sampling procedure has yielded the numbers of participating schools and students over the years shown in Table 2.

Questionnaire administration. About ten days before the administration, the seniors are given flyers explaining the study. The actual questionnaire administrations are conducted by the local Institute for Social Research representatives and their assistants, following standardized procedures detailed in a project instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations.

Questionnaire format. Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content intended for seniors is divided into six different questionnaire forms which are distributed to participants in an ordered sequence that ensures six virtually identical subsamples. (Five questionnaire forms were used between 1975 and 1988.) About one-third of each questionnaire form consists of key or "core" variables which are common to all forms. All demographic variables, and nearly all of the drug *use* variables included in this report, are contained in this core set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social environment are in a single form only, and are thus based on one-sixth as many cases (approximately 2,600) in 1989-1994 or one-fifth as many cases in 1975-1988 (approximately 3,300). All tables in this report give the sample sizes upon which the statistics are based, stated in terms of weighted numbers of cases (which are roughly equivalent to the actual numbers of cases).

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF LOWER GRADES

Beginning in 1991 the study was expanded to include nationally representative samples of eighth and tenth grade students. These are now conducted on an annual basis as are

TABLE 2

Sample Sizes and Response Rates

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Twelfth Grade																				
Number public schools	111	108	108	111	111	107	109	116	112	117	115	113	117	113	111	114	117	120	121	119
Number private schools	14	15	16	20	20	20	19	21	22	17	17	16	18	19	22	23	19	18	18	20
Total number schools	125	123	124	131	131	127	128	137	134	134	132	129	135	132	133	137	136	138	139	139
Total number students	15,791	16,678	18,436	18,924	16,662	16,524	18,267	18,348	16,947	16,499	16,502	15,713	16,843	16,795	17,142	15,676	15,483	16,251	16,763	15,929
Student response rate	78%	77%	79%	83%	82%	82%	81%	83%	84%	83%	84%	83%	84%	83%	86%	86%	83%	84%	84%	84%
Tenth Grade																				
Number public schools	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	107	106	111	116
Number private schools	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	19	17	14
Total number schools	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	121	125	128	130
Total number students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14,996	14,997	15,516	16,080
Student response rate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87%	88%	86%	88%
Eighth Grade																				
Number public schools	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	131	133	126	116
Number private schools	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31	26	30	34
Total number schools	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	162	159	156	150
Total number students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17,844	19,015	18,820	17,708
Student response rate	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90%	90%	90%	89%

SOURCE: The Monitoring the Future Study, the University of Michigan.

follow-up surveys (at two-year intervals) of representative sub-samples from each year's sample of eighth grades and tenth grades. The first such follow-ups were implemented in 1993.

In general, the procedures used for the annual in-school surveys of eighth and tenth grade students closely parallel those used for high school seniors, including the procedures for selecting schools and students, questionnaire administrations, and questionnaire formats. A major exception is that only two different questionnaire forms are used, rather than the six used with seniors. Identical forms are used for both eighth and tenth grades, and, for the most part, questionnaire content is drawn from the twelfth grade questionnaires. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. The two forms used in both eighth and tenth grades have a common core (Parts B and C) that parallels the core used in twelfth grade, and each form has somewhat different questions in Parts A and D. Many fewer questions about lifestyles and values are included in these forms than in the twelfth grade forms, in part because we think that many of these attitudes are more likely to be formed by twelfth grade, and therefore are best monitored there. For the national survey of eighth graders, approximately 160 schools (mostly junior high schools and middle schools) are sampled, and approximately 18,000 to 19,000 students are surveyed. For the tenth graders, approximately 125 high schools are sampled, and approximately 15,000 students are surveyed.

The research design calls for follow-up surveys of subsamples of the eighth and tenth graders participating in the study, carried out at two-year intervals, similar to the senior follow-up samples. To date, this plan has influenced the design of the cross-sectional studies of eighth and tenth graders in two important ways. First, in order to "capture" many of the eighth grade participants two years later in the normal tenth grade cross-sectional study for that year, we selected the eighth grade schools by first drawing a sample of high schools and then selecting a sample of their feeder schools which contain eighth graders. This extra stage in the sampling process meant that many of the eighth grade participants in, say, the 1991 cross-sectional survey were also participants in the 1993 cross-sectional survey of tenth graders. Thus, a fair amount of panel data were generated at no additional cost. However, having followed this design in 1993, we concluded that the saving in follow-up costs did not justify the complexities in sampling, administration, and interpretation. Therefore, we will return to a more simplified design beginning in the year 1995 in which eighth grade schools will be drawn independently of the tenth grade school sample, and *all* follow-ups of eighth graders will be completed by mail.

RESEARCH DESIGN AND PROCEDURES FOR THE FOLLOW-UP SURVEYS OF SENIORS

Beginning with the graduating class of 1976, each senior class has been followed up annually after high school on a continuing basis, for seven follow-up data collections, which corresponds to their reaching a modal age of 32.[7] From the roughly 15,000 to 17,000 seniors originally participating in a given class, a representative sample of 2,400 individuals is chosen for follow-up. In order to ensure sufficient numbers of drug users in the follow-up surveys, those fitting certain criteria of current drug use (that is, those reporting 20 or more occasions of using marijuana, or any use of any of the other illicit drugs, in the previous 30 days) are selected with higher probability (by a factor of 3.0) than the remaining seniors. Differential weighting then has been used in all follow-up analyses to compensate for the differential sampling probabilities. Because those in the drug-using stratum receive a weight of only .33 in the calculation of all statistics to compensate for their overrepresentation, the actual numbers of follow-up cases are somewhat larger than the weighted numbers reported in the tables. Weights are assigned to compensate for differential probabilities of selection at each stage. Final weights are normalized to average 1.0 (so that the weighted number of cases equals the unweighted number of cases overall).

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[7] Further follow-ups will occur at half-decade intervals, beginning with age 35.

The 2,400 selected respondents from each class are randomly assigned to one of two matching groups of 1,200 each; one group is surveyed on even-numbered calendar years, while the other group is surveyed on odd-numbered years. This two-year cycle is intended to reduce respondent burden, and thus yield a better retention rate across the years.

Follow-up procedures. Using information provided by respondents at the time of the senior survey (name, address, phone number, and the name and address of someone who would always know how to reach them), mail contacts are maintained with those selected for inclusion in the follow-up panels. Newsletters are sent each year, and name and address corrections are requested. The questionnaires are sent by certified mail in the spring of each year. A check for $5.00, made payable to the respondent, is attached to the front of each questionnaire.[8] Reminder letters and postcards go out at fixed intervals thereafter; finally, those not responding receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor. If requested, a second copy of the questionnaire is sent; but no questionnaire content is administered by phone.

Panel retention rates. To date the panel retention rates have remained quite high. In the first follow-up after high school, about 80% of the original panel have returned questionnaires. The retention rate reduces with time, as would be expected. The 1994 panel retention from the class of 1980–the oldest of the panels, now aged 32 (14 years past their first data collection in high school) is 67%.

Corrections for panel attrition. Since, to a modest degree, attrition is associated with drug use, we have introduced corrections into the prevalence estimates presented here for the follow-up panels. These raise the prevalence estimates from what they would be uncorrected, but only slightly. We believe the resulting estimates to be the most accurate obtainable for the population of high school senior graduates but still low for the age group as a whole, due to the omission of dropouts and absentees from the population covered by the original panels.[9]

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[8] Note that, beginning with the Class of 1992, the follow-up checks have been raised to $10.00 to compensate for the effects of inflation over the life of the study. An experiment conducted on recent classes suggested that the increased payment was justified based on the increased panel retention it achieved.

[9] The intent of the weighting process is to correct for the effects of differential attrition on follow-up drug use estimates. Different weights are used for different substances. Cigarettes, alcohol, and marijuana each have one weight for every follow-up of each graduating class. The weights are based on the observed differences in the distribution on an index of use of the

REPRESENTATIVENESS AND VALIDITY

School participation. Schools are invited to participate in the study for a two-year period. With very few exceptions, each school from the original sample participating in the first year has agreed to participate for the second. Each year thus far, from 58% to 80% of the high schools invited to participate initially have agreed to do so; for each school refusal, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement.[10] The selection of replacement schools almost entirely removes problems of bias in region, urbanicity, and the like, that might result from certain schools refusing to participate. Other potential biases could be more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, that would seriously bias the sample. And if any other single factor were dominant in most refusals, that also might suggest a source of serious bias. In fact, however, the reasons for a school refusing to participate are varied and are often a function of happenstance events specific to that particular year; only a very small proportion specifically object to the drug content of the survey. Thus we feel quite confident that school refusals have not seriously biased the surveys.

At each grade level, schools are selected in such a way that half of each year's sample is comprised of schools which participated the previous year, and half is comprised of schools which will participate the next year. This staggered half-sample design is used to check on possible errors in the year-to-year trend estimates due to school turnover. For example, separate sets of one-year trend estimates are computed for seniors using first that half-sample of schools which participated in both 1992 *and* 1993, then the half-sample which participated in both 1993 *and* 1994, and so on. Thus, each one-year trend estimate derived in this way is based on a constant set of at least 65 schools. When the resulting trend data (examined separately for each class of drugs) are compared with trends based on the total samples of schools, the results are highly similar, indicating that the trend estimates are little affected by turnover or shifting refusal rates in the school samples. As would be expected, the absolute prevalence estimates for a given year are not as accurate using just the half-sample, however.

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relevant substance based on the follow-up sample compared to the distribution based on the full base-year sample. For example, the distribution on the index of marijuana use in the 1988 follow-up of approximately 1,000 respondents from the class of 1976 was compared to the original 1976 base-year distribution for the entire participating base-year class of 17,000 respondents; and weights were derived which, when applied to the base-year data for only those participating in the 1988 follow-up, would reproduce the original base-year frequency distribution. A similar procedure is used to determine a weight for all illicits other than marijuana combined. In this case, however, an average weight is derived across graduating classes. Thus, the same weight is applied, for example, to all respondents in the follow-up of 1988, regardless of when they graduated from high school.

[10] Response rates for the junior high and middle schools which produce the eighth grade samples are a little more complicated to calculate. Calculation of the response rates for Monitoring the Future eighth grade schools surveyed in 1991 and 1992 (and half of those surveyed in 1993) is complicated by the fact that they are sampled by "network" (or cluster), based on the high school into which they feed. We first draw a representative sample of tenth grade schools, then sample eighth grade schools from the set of feeder schools to each high school. If there are more than two eighth grade schools feeding into a selected high school, we sample two schools. If either of those schools declines, we replace that school with another school in the same network of feeder schools. If no school in the network agrees to participate, then we count that as a refusal; if only one school in a network agrees to participate, but fails to meet a minimum size criterion of approximately one-third of combined enrollment of the chosen schools, that is also counted as a refusal. If only one of the schools agrees to participate, and that one represents at least one-third the combined enrollment of the chosen schools, then we accept that school, and reweight appropriately. Many networks, of course, have only one feeder eighth grade school in the network, in which case, a school refusal is equivalent to a network refusal. Response rates for the 1991 and 1992 eighth grade by network were: 74% and 69%, respectively.

Student participation. In 1994, completed questionnaires were obtained from 89% of all sampled students in eighth grade, 88% in tenth grade, and 84% in twelfth grade. (See Table 1 for response rates in earlier years). The single most important reason that students are missed is absence from class at the time of data collection; in most cases, it is not workable to schedule a special follow-up data collection for absent students. Students with fairly high rates of absenteeism also report above-average rates of drug use; therefore, there is some degree of bias introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting based on the reported absentee rates of the students who did respond; however, we decided not to use such a weighting procedure because the bias in overall drug use estimates was determined to be quite small, and because the necessary weighting procedures would have introduced greater sampling variance in the estimates. Appendix A in an earlier report[11] provides a discussion of this point and Appendix A to the present report shows trend and prevalence estimates which would result if corrections for absentees had been included.

Of course, some students are not absent from class, but simply refuse when asked to complete a questionnaire. However, the proportion of explicit refusals amounts to less than 1% of the target sample.

Sampling accuracy of the estimates. For purposes of this introduction, it is sufficient to note that drug use estimates based on the total sample of seniors each year have confidence intervals that average about ±1%. (As shown in Table 3 in Chapter 4, confidence intervals on lifetime prevalence for seniors vary from ±2.6% to ±0.3%, depending on the drug. Confidence intervals for past twelve months, past 30-days, and daily use would be smaller). This means that, had we been able to invite all schools and all seniors in the 48 coterminous states to participate, the results from such a massive survey should be within about one percentage point of our present findings for most drugs at least 95 times out of 100. We consider this to be a high level of sampling accuracy, and one that permits the detection of fairly small changes from one year to the next. Table 2 also presents the confidence intervals for tenth grade and eighth grade students on lifetime prevalence statistics, which are very close to those observed for twelfth graders. Tenth grade confidence intervals vary from ±2.5% to ±0.3%, and for eighth grade, confidence intervals vary from ±2.0% to ±0.3%.

VALIDITY OF THE MEASURES OF SELF-REPORTED DRUG USE

The question always arises whether sensitive behaviors like drug use are honestly reported. Like most studies dealing with sensitive behaviors, we have no direct, totally objective validation of the present measures; however, the considerable amount of inferential evidence that exists strongly suggests that the self-report questions produce largely valid data. A more complete discussion of the contributing evidence which leads to this conclusion may be found in other publications; here we will only briefly summarize the evidence.[12]

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[11] Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1984). *Drugs and American high school students: 1975-1983.* DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office.

First, using a three-wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability–a necessary condition for validity.[13] In essence, this means that respondents were highly consistent in their self-reported behaviors over a three- to four-year time interval. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of seniors reporting some illicit drug use by senior year has reached two-thirds of all respondents in peak years and nearly as high as 80% in some follow-up years, which constitutes *prima facie* evidence that the degree of underreporting must be very limited. Fourth, the seniors' reports of use by their unnamed friends–about which they would presumably have less reason to distort–has been highly consistent with self-reported use in the aggregate in terms of both prevalence and trends in prevalence, as will be discussed later in this report. Fifth, we have found self-reported drug use to relate in consistent and expected ways to a number of other attitudes, behaviors, beliefs, and social situations–in other words, there is strong evidence of "construct validity." Sixth, the missing data rates for the self-reported use questions are only very slightly higher than for the preceding nonsensitive questions, in spite of the instruction to respondents to leave blank those drug use questions they felt they could not answer honestly. And seventh, the great majority of respondents, when asked, say they would answer such questions honestly if they were users.

This is not to argue that self-reported measures of drug use are valid in all cases. In the present study we have gone to great lengths to create a situation and set of procedures in which students feel that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. We think the evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as there exists any remaining reporting bias, we believe it to be in the direction of underreporting. Thus, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

Consistency and the measurement of trends. One further point is worth noting in a discussion of the validity of the findings. The Monitoring the Future project is designed to be sensitive to changes from one time period to another. Accordingly, the measures and procedures have been standardized and applied consistently across each data collection. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, which means that our measurement of *trends* should be affected very little by any such biases. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

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[12] Johnston, L.D., & O'Malley, P.M. (1985). Issues of validity and population coverage in student surveys of drug use. In B.A. Rouse, N.J. Kozel, & L.G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85-1402). Washington, D.C.: U.S. Government Printing Office; Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1984). *Drugs and American high school students: 1975-1983*. DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office; Wallace, J.M., Jr., & Bachman, J.G. (1993). Validity of self-reports in student-based studies on minority populations: Issues and concerns. In M. de LaRosa (Ed.), *Drug abuse among minority youth: Advances in research and methodology*. NIDA Research Monograph. Rockville, MD: National Institute on Drug Abuse.

[13] O'Malley, P.M., Bachman, J.G., & Johnston, L.D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805-824.

Chapter 4

PREVALENCE OF DRUG USE AMONG EIGHTH, TENTH, AND TWELFTH GRADE STUDENTS

In this chapter we present the levels of drug use reported by the national samples of eighth, tenth, and twelfth grade students surveyed in 1994. Prevalence and frequency of use data are included for lifetime use, use in the past year, and use in the past month. The prevalence of current daily use also is provided. In addition, comparisons are given for key subgroups in the population based on six cross-break dimensions: sex, college plans, region of the country, population density (or urbanicity), socioeconomic status (as measured by the average education level of the parents), and racial/ethnic identification.

It should be noted that all of the prevalence statistics given in this section are based on students in attendance on the day of the survey administration. Selected prevalence rate estimates for twelfth grade students, reflecting adjustments for absentees, as well as for dropouts, may be found in Appendix A to this report. (Twelfth graders had 16% absent from the 1994 administration.) For eighth and tenth grades the adjustments for absenteeism and dropping out would be much smaller, since they have lower rates of absenteeism (11% and 12%, respectively) and much lower rates of dropping out.

PREVALENCE AND FREQUENCY OF DRUG USE IN 1994: ALL STUDENTS

Lifetime, Annual, and Monthly Prevalence and Frequency

Table 4 provides *prevalence* rates for the use of all drugs at all three grade levels in lifetime, past twelve months, past 30 days, and daily in past 30 days. *Frequency* of use for each drug within each prevalence period is provided in Tables 5a and 5b; Figure 2 presents the drugs ranked by lifetime prevalence for each of the three grade levels. Table 3 provides the 95% confidence interval around the lifetime prevalence estimate for each drug, taking into account the effects of stratification, clustering, and unequal weighting.

- Slightly less than half of all seniors (46%) report ***any illicit drug use*** at some time in their lives. (See Table 4). Some 37% of tenth graders and 26% of eighth graders say they have used an illicit drug at some time.[14]

- Of all the students in each grade reporting some illicit drug use in their lifetime, a significant proportion reported using *only* ***marijuana***: 32%

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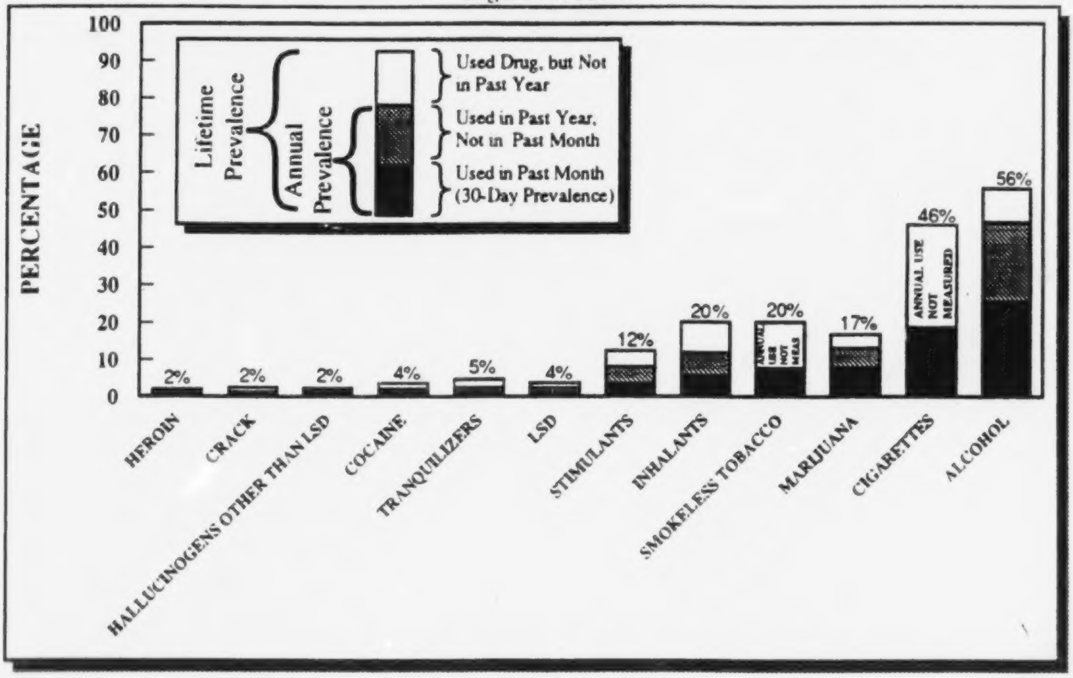
[14] For twelfth graders use of "other illicit drugs" includes any use of hallucinogens, cocaine, or heroin ***or*** any use of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers that are not under a doctor's orders. For eighth and tenth graders the use of other opiates and barbiturates has been excluded, both from the illicit drug indexes and from separate presentation in this volume. Questions on these drugs were included in the questionnaires given to eighth and tenth graders, but the results lead us to believe that some respondents were including nonprescription drugs in their answers, resulting in exaggerated prevalence rates.

FIGURE 2

Prevalence and Recency of Use
Various Types of Drugs for Eighth, Tenth, and Twelfth Graders, 1994

Eighth Graders



Tenth Graders

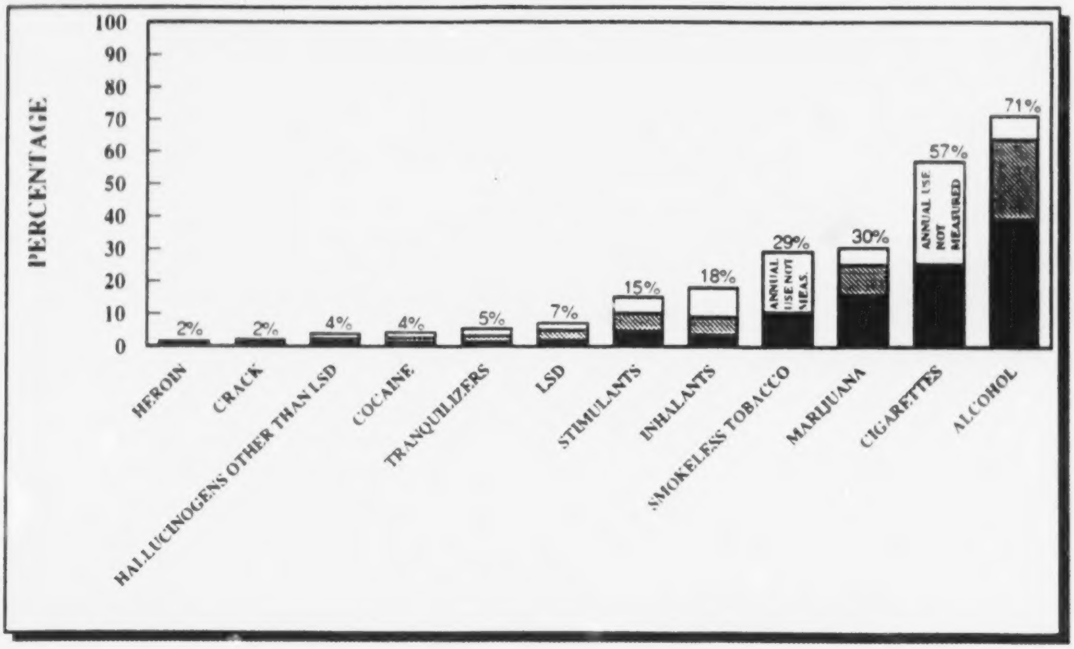


FIGURE 2 (cont.)

Prevalence and Recency of Use
Various Types of Drugs for Eighth, Tenth, and Twelfth Graders, 1994

Twelfth Graders

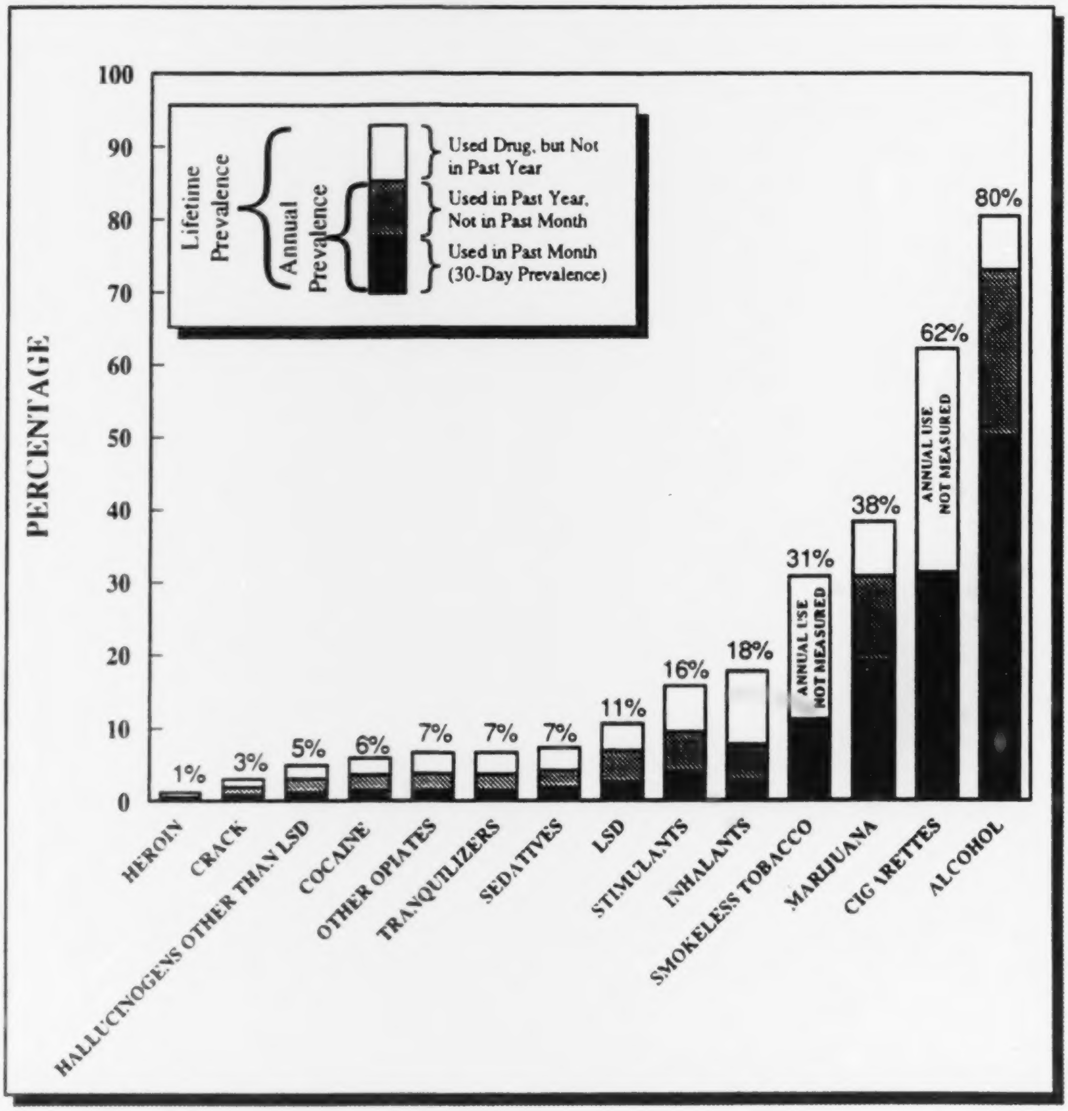


TABLE 3

Ninety-Five Percent Confidence Limits: Lifetime Prevalence Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	8th Grade			10th Grade			12th Grade		
	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit
Marijuana/Hashish	15.4	16.7	18.1	28.3	30.4	32.6	36.1	38.2	40.4
Inhalants[a]	18.5	19.9	21.3	16.8	18.0	19.3	16.6	17.7	18.9
Inhalants, Adjusted[a,b]	—	—	—	—	—	—	16.9	18.3	19.7
Amyl & Butyl Nitrites[c]	—	—	—	—	—	—	1.1	1.7	2.6
Hallucinogens	3.7	4.3	5.0	7.1	8.1	9.2	10.3	11.4	12.7
Hallucinogens, Adjusted[d]	—	—	—	—	—	—	10.6	11.7	12.9
LSD	3.1	3.7	4.4	6.2	7.2	8.3	9.4	10.5	11.7
PCP[c]	—	—	—	—	—	—	2.0	2.8	3.8
Cocaine	3.0	3.6	4.3	3.6	4.3	5.2	5.1	5.9	6.9
Crack	2.1	2.4	2.8	1.8	2.1	2.4	2.4	3.0	3.7
Other cocaine[e]	2.5	3.0	3.6	3.3	3.8	4.4	4.6	5.2	5.9
Heroin	1.6	2.0	2.5	1.1	1.5	2.1	0.9	1.2	1.5
Other opiates[f]	7.8	8.7	9.7	9.3	10.4	11.7	5.9	6.6	7.3
Stimulants[f]	11.2	12.3	13.4	13.7	15.1	16.6	14.4	15.7	17.1
Crystal Meth. (Ice)[g]	—	—	—	—	—	—	2.5	3.4	4.5
Sedatives[c,f]	—	—	—	—	—	—	6.4	7.3	8.3
Barbiturates[f]	6.6	7.4	8.3	7.6	8.6	9.8	6.1	7.0	8.0
Methaqualone[c,f]	—	—	—	—	—	—	0.9	1.4	2.2
Tranquilizers[f]	3.9	4.6	5.4	4.6	5.4	6.4	5.7	6.6	7.6
Alcohol	54.0	55.8	57.6	69.5	71.1	72.7	78.2	80.4	82.4
Been drunk[e]	24.3	25.9	27.5	45.4	47.2	49.0	60.3	62.9	65.4
Cigarettes	44.2	46.1	48.0	55.2	56.9	58.6	60.2	62.0	63.8
Smokeless Tobacco[c]	18.0	19.9	21.9	26.8	29.2	31.7	29.0	30.7	32.5
Steroids[g]	1.6	2.0	2.5	1.3	1.8	2.4	1.7	2.4	3.4

NOTES: '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

Approximate Ns: 8th grade = 17,300, 10th grade = 15,800, 12th grade = 15,400

[a] 12th grade only: Data based on five of six questionnaire forms. N is five-sixths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Data based on one questionnaire form. N is one-half of N indicated for 8th and 10th grades and one-sixth of N indicated for 12th grade.

[d] Adjusted for underreporting of PCP. See text for details.

[e] 12th grade only: Data based on four of six questionnaire forms. N is four-sixths of N indicated.

[f] Only drug use which was not under a doctor's orders is included here.

[g] 12th grade only: Data based on two of six questionnaire forms. N is two-sixths of N indicated.

TABLE 4

A Comparison of Drug Usage Rates Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Lifetime			Annual			30-Day			Daily		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N =	*17,300*	*15,800*	*15,400*	*17,300*	*15,800*	*15,400*	*17,300*	*15,800*	*15,400*	*17,300*	*15,800*	*15,400*
Any Illicit Drug[a]	25.7	37.4	45.6	18.5	30.0	35.8	10.9	18.5	21.9	—	—	—
Any Illicit Drug[a] Other Than Marijuana	17.5	21.7	27.6	11.3	15.2	18.0	5.6	7.1	8.8	—	—	—
Any Illicit Drug[a] Including Inhalants	35.1	42.7	49.1	24.2	32.5	37.6	14.3	20.0	23.0	—	—	—
Marijuana/Hashish	16.7	30.4	38.2	13.0	25.2	30.7	7.8	15.8	19.0	0.7	2.2	3.6
Inhalants[b]	19.9	18.0	17.7	11.7	9.1	7.7	5.6	3.6	2.7	0.2	0.1	0.1
Inhalants, Adjusted[b,c]	—	—	18.3	—	—	8.2	—	—	2.9	—	—	—
Amyl/Butyl Nitrites[d]	—	—	1.7	—	—	1.1	—	—	0.4	—	—	0.2
Hallucinogens	4.3	8.1	11.4	2.7	5.8	7.6	1.3	2.4	3.1	0.1	0.1	0.1
Hallucinogens, Adjusted[c]	—	—	11.7	—	—	7.8	—	—	3.2	—	—	—
LSD	3.7	7.2	10.5	2.4	5.2	6.9	1.1	2.0	2.6	*	*	0.1
PCP[d]	—	—	2.8	—	—	1.6	—	—	0.7	—	—	0.3
Hallucinogens Other than LSD	2.2	3.8	4.9	1.3	2.4	3.1	0.7	1.0	1.2	*	*	*
Cocaine	3.6	4.3	5.9	2.1	2.8	3.6	1.0	1.2	1.5	0.1	0.1	0.1
Crack	2.4	2.1	3.0	1.3	1.4	1.9	0.7	0.6	0.8	*	*	0.1
Other Cocaine[e]	3.0	3.8	5.2	1.7	2.4	3.0	0.9	1.0	1.3	*	*	0.1
Heroin	2.0	1.5	1.2	1.2	0.9	0.6	0.6	0.4	0.3	0.1	*	*
Other Opiates[f]	—	—	6.6	—	—	3.8	—	—	1.5	—	—	0.1
Stimulants[f]	12.3	15.1	15.7	7.9	10.2	9.4	3.6	4.5	4.0	0.1	0.1	0.2
Crystal Meth. (Ice)[g]	—	—	3.4	—	—	1.8	—	—	0.7	—	—	*
Sedatives[f]	—	—	7.3	—	—	4.2	—	—	1.8	—	—	*
Barbiturates[f]	—	—	7.0	—	—	4.1	—	—	1.7	—	—	*
Methaqualone[d,f]	—	—	1.4	—	—	0.8	—	—	0.4	—	—	0.1
Tranquilizers[f]	4.6	5.4	6.6	2.4	3.3	3.7	1.1	1.5	1.4	0.1	*	0.1
Alcohol												
Any use	55.8	71.1	80.4	46.8	63.9	73.0	25.5	39.2	50.1	1.0	1.7	2.9
5+ drinks in last 2 weeks	—	—	—	—	—	—	—	—	—	14.5	23.6	28.2
Been Drunk[d]	25.9	47.2	62.9	18.2	38.0	51.7	8.7	20.3	30.8	0.3	0.4	1.2
Cigarettes												
Any use	46.1	56.9	62.0	—	—	—	18.6	25.4	31.2	8.8	14.6	19.4
1/2 pack+/day	—	—	—	—	—	—	—	—	—	3.6	7.6	11.2
Smokeless Tobacco[d]	19.9	29.2	30.7	—	—	—	7.7	10.5	11.1	1.9	3.0	3.9
Steroids[d]	2.0	1.8	2.4	1.2	1.1	1.3	0.5	0.6	0.9	*	0.1	0.4

NOTES: '—' indicates data not available. '*' indicates less than .05 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] For 12th graders: Use of "any illicit drugs" includes any use of marijuana, hallucinogens, cocaine, or heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders: The use of other opiates and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] 12th grade only: Data based on five of six questionnaire forms; N is five-sixths of N indicated.

[c] 12th grade only: Adjusted for underreporting of certain drugs. See text for details.

[d] 8th and 10th grade: data based on one of two questionnaire forms. N is one-half of N indicated.
12th grade: Data based on one of six questionnaire forms. N is one-sixth of N indicated.

[e] 12th grade only: Data based on four of six questionnaire forms. N is four-sixths of N indicated.

[f] Only drug use which was not under a doctor's orders is included here.

[g] 12th grade only: Data based on two of six questionnaire forms. N is two-sixths of N indicated.

TABLE 5a

Frequency of Use of Various Types of Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Marijuana			Inhalants[a,b]			Amyl/Butyl[c] Nitrites			Hallucinogens[a]			LSD			PCP[c]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N=	17300	15800	15400	17300	15800	12800	—	—	2600	17300	15800	15400	17300	15800	15400	—	—	2600
Lifetime Frequency																		
No occasions	83.3	69.6	61.8	80.1	82.0	82.3	—	—	98.3	95.7	91.9	88.6	96.3	92.8	89.5	—	—	97.2
1-2 occasions	6.2	8.7	8.8	11.3	10.3	9.4	—	—	0.6	2.1	3.6	4.1	2.1	3.8	4.2	—	—	1.4
3-5 occasions	2.7	4.6	5.4	3.6	3.2	3.2	—	—	0.3	1.1	2.0	2.7	0.6	1.2	2.2	—	—	0.4
6-9 occasions	1.8	3.4	3.9	1.9	1.7	1.6	—	—	0.3	0.3	0.9	1.1	0.3	0.9	1.3	—	—	0.3
10-19 occasions	1.7	3.5	5.0	1.4	1.3	1.7	—	—	0.1	0.4	0.8	1.4	0.3	0.6	1.1	—	—	0.5
20-39 occasions	1.4	3.1	4.3	0.7	0.7	0.8	—	—	0.2	0.1	0.4	0.8	0.2	0.4	0.8	—	—	0.1
40 or more	2.8	7.1	10.7	1.1	0.9	1.0	—	—	0.3	0.4	0.5	1.3	0.2	0.3	1.0	—	—	0.2
Annual Frequency																		
No occasions	87.0	74.8	69.3	88.3	90.9	92.3	—	—	98.9	97.3	94.2	92.4	97.6	94.8	93.1	—	—	98.4
1-2 occasions	5.2	7.9	8.4	7.0	5.4	4.3	—	—	0.5	1.5	2.7	3.2	1.6	2.9	3.5	—	—	0.8
3-5 occasions	2.3	4.2	4.7	2.2	1.6	1.4	—	—	0.3	0.6	1.6	2.1	0.3	1.0	1.5	—	—	0.2
6-9 occasions	1.7	3.1	4.0	1.1	0.9	0.9	—	—	0.0	0.2	0.5	0.9	0.2	0.5	0.8	—	—	0.2
10-19 occasions	1.4	3.2	4.1	0.7	0.7	0.5	—	—	0.1	0.3	0.6	0.8	0.2	0.4	0.6	—	—	0.1
20-39 occasions	1.2	2.7	3.3	0.3	0.3	0.3	—	—	0.1	0.1	0.2	0.3	0.1	0.2	0.2	—	—	0.1
40 or more	1.2	4.1	6.3	0.3	0.2	0.2	—	—	0.1	0.1	0.2	0.3	0.1	0.1	0.2	—	—	0.2
30-Day Frequency																		
No occasions	92.2	84.2	81.0	94.4	96.4	97.3	—	—	99.6	98.7	97.6	96.9	98.9	98.0	97.4	—	—	99.3
1-2 occasions	3.4	6.4	7.0	3.7	2.3	1.8	—	—	0.1	0.7	1.5	1.9	0.7	1.5	1.9	—	—	0.3
3-5 occasions	1.6	3.2	3.7	1.0	0.6	0.4	—	—	0.0	0.3	0.6	0.7	0.2	0.3	0.4	—	—	0.0
6-9 occasions	1.1	2.2	2.2	0.4	0.4	0.1	—	—	0.0	0.1	0.2	0.2	0.1	0.2	0.2	—	—	0.1
10-19 occasions	0.9	1.9	2.5	0.2	0.1	0.3	—	—	*	0.1	0.1	0.1	0.1	0.1	0.1	—	—	0.0
20-39 occasions	0.5	1.2	1.7	0.1	0.1	*	—	—	0.1	*	*	0.1	0.0	*	*	—	—	0.1
40 or more	0.3	1.0	1.8	0.1	0.1	0.1	—	—	0.1	*	*	*	*	*	*	—	—	0.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 5a (cont.)

Frequency of Use of Various Types of Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Cocaine			Crack			Other Cocaine[d]			Heroin			Other Opiates			Stimulants[e,f]		
Grade	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N=	17300	15800	15400	17300	15800	15400	17300	15800	10300	17300	15800	15400	—	—	15400	17300	15800	15400
Lifetime Frequency																		
No occasions	96.4	95.7	94.1	97.6	97.9	97.0	97.0	96.2	94.8	98.0	98.5	98.8	—	—	93.4	87.7	84.9	84.3
1-2 occasions	1.5	2.0	2.4	1.4	1.2	1.4	1.8	2.2	2.5	1.1	0.9	0.6	—	—	3.3	6.7	7.1	6.9
3-5 occasions	1.0	1.1	1.3	0.3	0.3	0.5	0.4	0.5	0.8	0.2	0.2	0.2	—	—	1.3	2.2	3.0	3.1
6-9 occasions	0.2	0.4	0.6	0.2	0.2	0.4	0.3	0.4	0.5	0.2	0.1	0.1	—	—	0.7	1.2	1.6	1.6
10-19 occasions	0.3	0.4	0.6	0.2	0.1	0.2	0.2	0.2	0.5	0.2	0.1	0.1	—	—	0.6	0.9	1.4	1.7
20-39 occasions	0.1	0.1	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1	—	—	0.3	0.4	0.9	1.0
40 or more	0.4	0.4	0.7	0.1	0.1	0.3	0.2	0.2	0.5	0.1	0.1	0.1	—	—	0.5	0.7	1.1	1.4
Annual Frequency																		
No occasions	97.9	97.2	96.4	98.7	98.6	98.1	98.3	97.6	97.0	98.8	99.1	99.4	—	—	96.2	92.1	89.8	90.6
1-2 occasions	0.9	1.4	1.6	0.7	0.8	0.9	1.0	1.5	1.5	0.6	0.5	0.4	—	—	2.1	4.7	5.3	4.6
3-5 occasions	0.6	0.8	0.9	0.2	0.2	0.4	0.3	0.5	0.6	0.3	0.1	0.1	—	—	0.7	1.5	2.1	1.8
6-9 occasions	0.2	0.2	0.4	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1	—	—	0.4	0.6	1.1	1.0
10-19 occasions	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.1	0.1	*	—	—	0.3	0.6	0.9	1.0
20-39 occasions	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.2	*	*	0.1	—	—	0.2	0.3	0.5	0.5
40 or more	0.1	0.1	0.2	*	0.1	0.2	0.1	0.1	0.2	0.1	*	*	—	—	0.1	0.2	0.3	0.4
30-Day Frequency																		
No occasions	99.0	98.8	98.5	99.3	99.4	99.2	99.1	99.0	98.7	99.4	99.6	99.7	—	—	98.5	96.4	95.5	96.0
1-2 occasions	0.5	0.6	0.8	0.4	0.4	0.4	0.5	0.6	0.7	0.3	0.2	0.2	—	—	0.9	2.2	2.7	2.3
3-5 occasions	0.3	0.3	0.4	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	—	—	0.2	0.6	0.9	0.8
6-9 occasions	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	—	—	0.1	0.3	0.5	0.4
10-19 occasions	0.1	0.1	0.1	0.1	*	*	0.1	*	0.1	*	*	*	—	—	0.1	0.2	0.3	0.3
20-39 occasions	0.1	*	*	*	*	*	*	*	*	*	*	*	—	—	*	0.1	0.1	0.1
40 or more	*	0.1	0.1	*	*	0.1	*	*	0.1	0.1	*	*	—	—	0.1	0.1	*	0.1

SOURCE: The Monitoring the Future Study, the University of Michigan

(Table continued on next page)

TABLE 5a (cont.)

Frequency of Use of Various Types of Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Crystal Meth. (Ice)[g]			Barbiturates[f]			Tranquilizers[f]			Alcohol			Been Drunk[g]			Steroids[g]		
Grade	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N=	—	—	5100	—	—	15400	17300	15800	15400	17300	15800	15400	17300	15800	5100	8700	7900	5100
Lifetime Frequency																		
No occasions	—	—	96.6	—	—	93.0	95.4	94.6	93.4	44.2	28.9	19.6	74.1	52.8	37.1	98.0	98.2	97.6
1-2 occasions	—	—	2.2	—	—	3.4	3.0	3.1	3.5	14.4	11.2	8.6	13.5	17.7	14.7	1.2	1.0	1.0
3-5 occasions	—	—	0.4	—	—	1.4	0.7	1.0	1.4	12.3	12.8	10.4	5.0	9.4	11.8	0.3	0.3	0.3
6-9 occasions	—	—	0.1	—	—	0.8	0.3	0.7	0.6	8.6	11.0	9.4	2.7	6.0	7.6	0.2	0.1	0.2
10-19 occasions	—	—	0.3	—	—	0.7	0.3	0.2	0.5	8.4	12.2	13.5	2.2	5.9	9.0	0.1	0.2	0.1
20-39 occasions	—	—	0.1	—	—	0.4	0.1	0.2	0.3	5.0	8.9	12.2	1.0	3.8	7.5	0.1	0.1	0.3
40 or more	—	—	0.3	—	—	0.4	0.1	0.2	0.4	7.2	15.0	26.4	1.5	4.4	12.2	0.1	0.2	0.6
Annual Frequency																		
No occasions	—	—	98.2	—	—	95.9	97.6	96.7	96.3	53.2	36.1	27.0	81.8	62.0	48.3	98.8	98.9	98.7
1-2 occasions	—	—	1.0	—	—	2.2	1.6	2.1	2.2	20.8	20.3	17.2	10.9	17.8	17.6	0.8	0.6	0.4
3-5 occasions	—	—	0.3	—	—	0.7	0.4	0.6	0.6	10.5	13.7	13.0	3.3	8.0	10.2	0.2	0.2	0.3
6-9 occasions	—	—	0.1	—	—	0.5	0.2	0.3	0.4	6.5	10.4	11.0	1.7	4.7	7.3	0.1	0.2	0.1
10-19 occasions	—	—	0.2	—	—	0.3	0.1	0.1	0.2	4.8	9.2	13.0	1.2	3.9	7.6	0.1	0.1	0.1
20-39 occasions	—	—	0.1	—	—	0.2	*	0.1	0.1	2.3	5.3	8.3	0.6	1.9	4.1	*	*	0.1
40 or more	—	—	*	—	—	0.1	0.1	*	0.2	1.9	5.0	10.4	0.5	1.5	4.8	*	0.1	0.3
30-Day Frequency																		
No occasions	—	—	99.3	—	—	98.3	98.9	98.5	98.6	74.5	60.8	49.9	91.3	79.7	69.2	99.5	99.4	99.1
1-2 occasions	—	—	0.4	—	—	1.0	0.7	1.1	0.8	14.5	19.2	21.1	5.8	12.7	16.3	0.3	0.3	0.3
3-5 occasions	—	—	0.2	—	—	0.3	0.2	0.2	0.3	5.6	10.4	13.0	1.5	4.3	6.5	0.1	0.1	0.1
6-9 occasions	—	—	*	—	—	0.2	0.1	0.1	0.1	2.9	4.8	7.8	0.7	1.9	4.6	0.1	0.1	0.0
10-19 occasions	—	—	0.1	—	—	0.1	*	*	0.1	1.6	3.0	5.3	0.4	1.0	2.3	*	*	0.1
20-39 occasions	—	—	*	—	—	*	*	*	*	0.5	0.9	1.4	0.1	0.2	0.6	*	*	0.1
40 or more	—	—	*	—	—	*	*	*	0.1	0.5	0.8	1.5	0.2	0.2	0.6	*	*	0.3

NOTES: '—' indicates data not available. '*' indicates less than .05 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Unadjusted for known underreporting of certain drugs. See text for details.
[b] 12th grade only. Data based on five of six questionnaire forms. N is five-sixths of N indicated.
[c] 12th grade only. Data based on one of six questionnaire forms. N is one-sixth of N indicated.
[d] 12th grade only. Data based on four of six questionnaire forms. N is four-sixths of N indicated.
[e] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.
[f] Only drug use which was not under a doctor's orders is included here.
[g] 12th grade only. Data based on two of six questionnaire forms. N is two-sixths of N indicated.

of all 8th grade users of any illicit drug (or 8% of the total eighth grade sample), 42% of all tenth grade users of any illicit drug (or 16% of the total tenth grade sample), and 39% of the twelfth grader users of any illicit drug (or 18% of the total twelfth grader sample).

- When inhalants are also included in the index of illicit drug use, the proportions who have ever used any illicit drug rise considerably, particularly for eighth graders. The percents using ***any illicit drug including inhalants*** are 35% for eighth graders, 43% for tenth graders, and 49% for twelfth graders. Stated as proportions, over one-third of eighth graders, who have a modal age of 13, have tried an illicit drug. About one-half of all high school seniors have done so.

- ***Marijuana*** is by far the most widely used illicit drug among seniors and tenth graders, and among eighth graders it follows inhalants in terms of lifetime use. Thirty-eight percent of seniors reported some marijuana use in their lifetime, 31% reported some use in the past year, and 19% reported some use in the past month. Among tenth graders, 30% reported some marijuana use in their lifetime, 25% reported some use in the past year, and 16% reported some use in the past month. Among eighth grade students, marijuana has been used by one in six (17%), with 13% reporting use in the prior year and 8% use in the prior month.

- ***Inhalants*** have become an important class of drugs, with the highest lifetime prevalence rate among eighth graders (20%) of any of the illicitly used drugs. In tenth and twelfth grades, inhalants have lifetime prevalence rates of 18%, making them second to marijuana in most prevalent of the illicit drugs. However, in terms of current use, inhalants rank lower in the upper grade levels since more of the early users have discontinued use.

- Inhalants are followed closely by ***stimulants***, with lifetime prevalence rates of 12% for eighth graders, 15% for tenth graders, and 16% for twelfth graders.

- ***Hallucinogens*** are the next most widely used class of substances among both tenth and twelfth graders (lifetime prevalences of 8% and 11%, respectively) primarily due to the prevalence of LSD use (7% and 11%). Among eighth graders hallucinogens also rank high (4.3%, 3.7% for LSD specifically) although tranquilizers show a slightly higher lifetime prevalence (4.6%).

- About one in sixty seniors (1.7%) have tried the specific classes of inhalants known as ***amyl and butyl nitrites***. These inhalants have been sold legally in the past and go by the street names "poppers" or "snappers" and such brand names as Locker Room and Rush. Use of nitrites was not asked of eighth and tenth grade students.

Because we included questions specifically about nitrite use for the first time in one 1979 senior questionnaire form, we discovered that some users of amyl and butyl nitrites did not report themselves to be inhalant users, as they should have. We were able to make estimates of the degree to which inhalant use was being underreported. As a result, all inhalant prevalence estimates made since then have been corrected for nitrite use. This correction has made very little difference in recent years because of the low rates of nitrite use.[15]

We also discovered in 1979, when specific questions about ***PCP*** use were added, that some users of PCP did not report themselves as users of hallucinogens, even though PCP is explicitly included as an example in the questions about hallucinogens. Thus, from 1979 onward, the ***hallucinogen*** prevalence and trend estimates for seniors also have been adjusted upward to correct for this known underreporting (PCP use is not asked of eighth and tenth graders).[2] Again, this correction has made rather little difference in recent years among seniors, because the rate of PCP use is so low.

- Lifetime prevalence among seniors for the specific hallucinogenic drug ***PCP*** now stands at 2.8%, substantially lower than the lifetime prevalence of the other most widely used hallucinogen, ***LSD*** (10.5%).

- The use of ***cocaine*** now ranks lower than it used to, with lifetime prevalence among seniors at 5.9%, and the lifetime prevalence for eighth and tenth graders at 3.6% and 4.3%, respectively.

- ***Crack cocaine*** comes in small chunks or "rocks" and can be smoked to produce a more rapid and intense high. Crack has a relatively low prevalence in all grade levels; a lifetime prevalence of 2.4% for grade 8, 2.1% for grade 10, and 3.0% for grade 12.

- Of all students reporting any cocaine use, a significant proportion have some experience with crack: two-thirds of the eighth graders who reported any cocaine use, and one-half of the tenth and twelfth graders who reported any cocaine use.

- ***Heroin*** is the least commonly used of the illicit drugs for each grade level. Lifetime use is 2.0% for eighth grade students, 1.5% for tenth grade students, and 1.2% for twelfth grade students. The unusual pattern of younger students having a higher prevalence level appears in a number of studies, and may reflect the fact that heroin users are considerably more likely to have left school by senior year. It is also possible that the "noise" level is higher in the earlier grades, with slightly more false reporting either intentionally or unintentionally.

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[15] Because the data to adjust inhalant and hallucinogen use for seniors are available from only a single questionnaire form in a given year, the original uncorrected variables will be used in most relational analyses. We believe relational analyses will be least affected by these underestimates and that the most serious impact is on prevalence estimates, which have been adjusted appropriately. Today, the very low levels of use for nitrites and PCP–the two drugs which were used to adjust the estimates for inhalants and hallucinogens, respectively–are so low that these adjustments are hardly relevant any longer. Therefore, questions about their use have not been included in the eighth and tenth grade questionnaires.

- ***Tranquilizers*** fall in the middle of the rankings, with lifetime prevalence rates of 4.6%, 5.4%, and 6.6% for grades 8, 10, and 12.

- ***Sedatives*** (7.3% lifetime prevalence) and ***opiates other than heroin*** (6.6%) are also in the middle ranking for seniors. (Data for eighth and tenth graders are not reported, see footnote 15.)

- Within the general class of sedatives, the specific drug ***methaqualone*** is used by considerably fewer seniors (1.4% lifetime prevalence) than the much broader subclass of sedatives, ***barbiturates*** (7.0% lifetime prevalence). Because methaqualone use has become so limited, questions about its use have not been included in the eighth and tenth grade questionnaires.

- The illicit drug classes remain in roughly the same order whether ranked by lifetime, annual, or monthly prevalence, as the data in Figure 2 illustrate. The only important change in ranking occurs for ***inhalant use*** among the tenth and twelfth graders, for whom inhalants rank lower in terms of current use than was true for lifetime use, because use of a number of the inhalants, like glues and aerosols, tends to be discontinued at a relatively early age. Among the eighth graders, however, it should be noted that more than one in nine (11.7%) sniffed or "huffed" some inhalant in the prior twelve months, and one in eighteen (5.6%) did so in the month prior to the survey.

- Use of either of the two major licit drugs, alcohol and cigarettes, remains more widespread than use of any of the illicit drugs. Four out of every five students (80%) have at least tried ***alcohol*** by twelfth grade, and half of all twelfth (50%) report using it in just the month prior to the survey (Table 4). Even among eighth graders, the number of students who report some alcohol use in their life is high: more than half (56%) say they have tried alcohol and a quarter (26%) are current drinkers.[16]

- Of greater concern than just any use of alcohol is its use to the point of inebriation: 26% of the eighth graders, 47% of the tenth graders, and

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[16] In 1993 the text of the alcohol prevalence questions was changed slightly in half of the forms for all grades to explicitly *exclude* those occasions when the respondent had "just a few sips" of an alcoholic beverage. In 1994 this change was made to the remaining forms. The 1994 data presented here are all based on the revised question. On later tables and graphs in this volume, the 1993 data are presented for both the original question and the revised question. As would be expected, the prevalence rates dropped slightly as a result of this methodological change, with the largest shifts observed in the lifetime prevalence measures and among the eighth grade respondents. See Table 2 to examine the effects of this change.

63% of the twelfth graders say they have "***been drunk***" at least once in their life. The prevalence of self-reported drunkenness in the most recent 30 days is 9%, 20%, and 31%, respectively.

- Another measure of heavy drinking asks respondents on how many occasions within the previous two weeks they had consumed ***five or more drinks in a row***. Prevalence rates for this behavior are 15%, 24%, and 28% for the three grades, respectively.

- Nearly two-thirds (62%) of seniors report having tried ***cigarettes*** at some time, and nearly one-third (31%) smoked at least some in the past month. Even among eighth graders, 46% report having tried cigarettes and 19% used in the past month.

- ***Smokeless tobacco*** is used by a surprisingly large number of young people. Among eighth, tenth, and twelfth graders, lifetime prevalence rates are 20%, 29%, and 31%, respectively, while current prevalence rates are 8%, 11%, and 11%. As will be discussed further below, the rates are considerably higher among boys, who account for most smokeless tobacco use.

Anabolic steroids, a class of controlled substances, were added to the study in recent years. These drugs bear some resemblance to other drugs in the study in that they are controlled but find their way into an illicit market. They also carry a particular danger for HIV transmission since they are often taken by injection. They differ from all the other drugs discussed here, however, in that they are not usually taken for their direct psychoactive effects, though they may have some, but rather for their enhancement of the user's musculature. Clearly their potential unintended consequences, including the transmission of HIV, make their illicit use a public health concern. It is for these reasons that they have been added to the study.

- The prevalence rates for ***anabolic steroids*** are relatively low at present. For eighth, tenth, and twelfth graders, lifetime prevalence is 2.0%, 1.8%, and 2.4%, while current (past month) prevalence is 0.5%, 0.6%, and 0.9%. (Rates for males are distinctly higher, as will be discussed below.)

While most of the discussion in this volume focuses on prevalence rates for different time periods (i.e., lifetime, annual, and 30-day), some readers may be interested in more detailed information about the frequency with which various drugs have been used in these same time periods. Tables 5a and 5b present frequency-of-use information in as much detail as the original question and answer sets contain.

Daily Prevalence

Frequent use of illicit or licit drugs is a great concern for the health and safety of adolescents. Tables 9 and 14 and Figure 3 show the prevalence of current daily or near-daily use of the

TABLE 5b

Frequency of Occasions of Heavy Drinking, and Cigarette and Smokeless Tobacco Use Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Percent who used		
	8th Grade	10th Grade	12th Grade
Q *Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row?*			
None	85.5	76.4	71.8
Once	5.8	9.2	10.2
Twice	3.8	6.2	7.1
3 to 5 times	2.8	5.1	7.6
6 to 9 times	1.0	1.5	1.8
10 or more times	1.0	1.6	1.5
Approx. N=	17300	15800	15400
Q *Have you ever smoked cigarettes?*			
Never	53.9	43.1	38.0
Once or twice	23.3	24.1	23.9
Occasionally but not regularly	10.9	13.9	15.6
Regularly in the past	5.7	7.6	7.0
Regularly now	6.1	11.3	15.6
Approx. N=	17300	15800	15400
Q *How frequently have you smoked cigarettes during the past 30 days?*			
Not at all (includes "never" category from question above)	81.4	74.6	68.8
Less than one cigarette per day	9.8	10.8	11.8
One to five cigarettes per day	5.2	7.0	8.2
About one-half pack per day	1.7	4.0	5.5
About one pack per day	1.0	2.6	4.4
About one and one-half packs per day	0.4	0.7	1.1
Two packs or more per day	0.4	0.4	0.3
Approx. N=	17300	15800	15400
Q *Have you ever taken or used smokeless tobacco (snuff, plug, dipping tobacco, chewing tobacco)?*			
Never	80.1	70.8	69.3
Once or twice	12.0	15.7	15.2
Occasionally but not regularly	4.0	7.2	7.1
Regularly in the past	2.0	3.1	3.9
Regularly now	2.0	3.2	4.5
Approx. N=	8700	7900	2600
Q *How frequently have you taken smokeless tobacco during the past 30 days?*			
Not at all (includes "never" category from question above)	92.3	89.5	88.9
Once or twice	3.8	5.1	5.1
Once or twice per week	1.2	1.5	1.2
Three to five times per week	0.7	0.9	0.9
About once a day	0.7	0.6	1.1
More than once a day	1.1	2.4	2.9
Approx. N=	8700	7900	2600

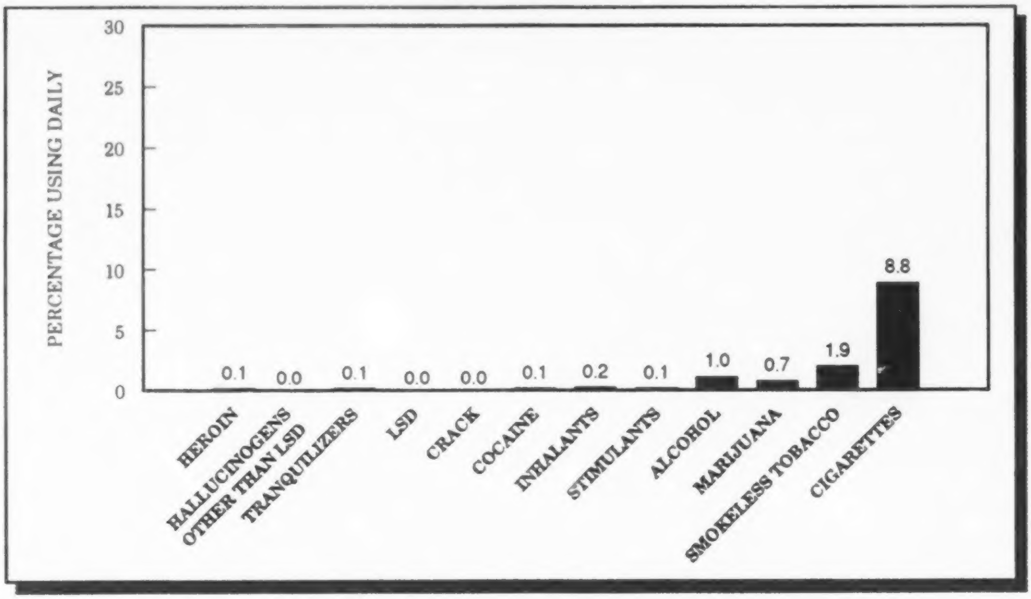
SOURCE: The Monitoring the Future Study, the University of Michigan.

FIGURE 3

Thirty-Day Prevalence of Daily Use

Various Types of Drugs for Eighth, Tenth, and Twelfth Graders, 1994

Eighth Graders



Tenth Graders

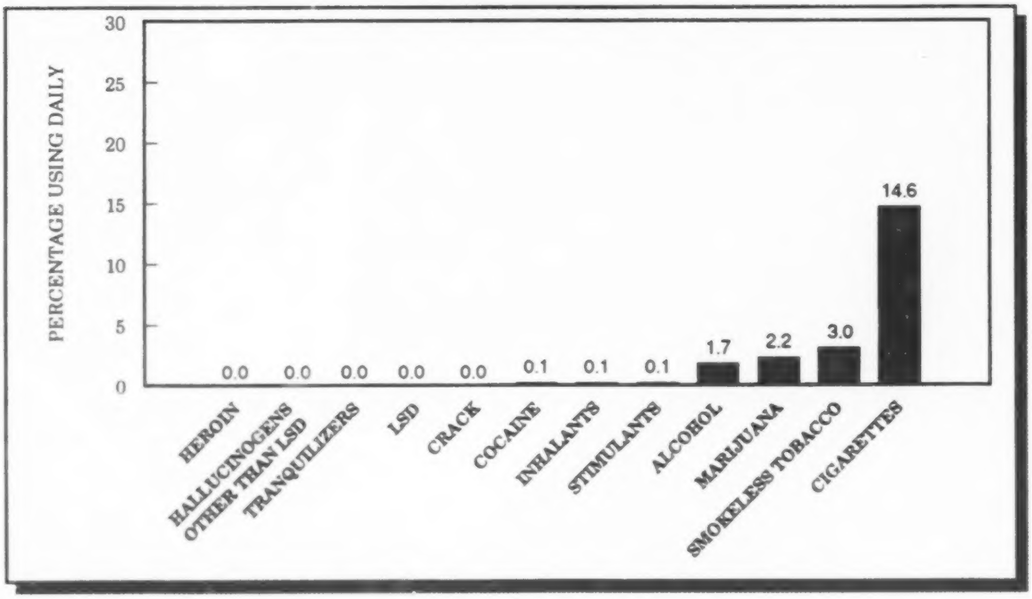
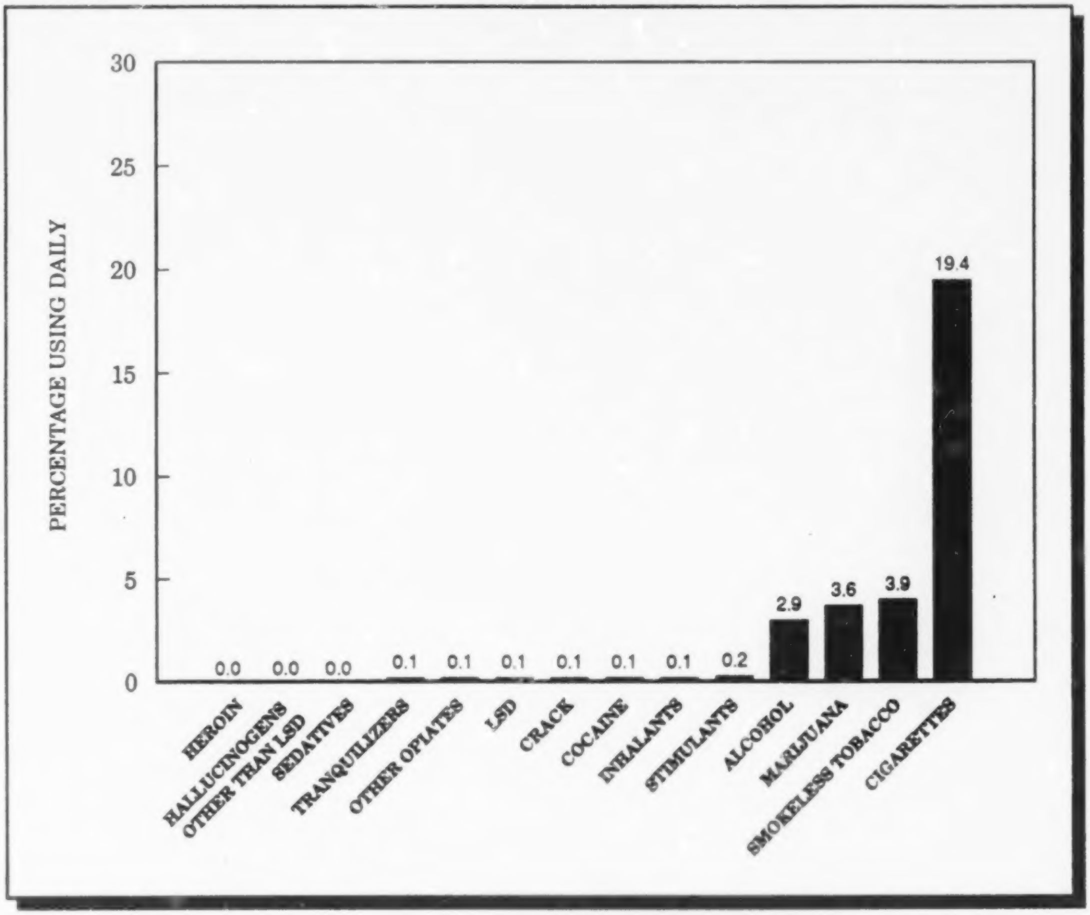


FIGURE 3 (cont.)

Thirty-Day Prevalence of Daily Use
Various Types of Drugs for Eighth, Tenth, and Twelfth Graders, 1994

Twelfth Graders



various classes of drugs. For all drugs except cigarettes and smokeless tobacco, respondents are considered daily users if they indicated that they had used the drug on twenty or more occasions in the preceding 30 days. In the case of cigarettes, respondents explicitly state the use of one or more cigarettes per day, and for smokeless tobacco they state using "about once a day" or more often.

- Across all three grade levels, ***cigarettes*** are used daily by more of the respondents than any of the other drug classes: 9%, 15%, and 19% in grades 8, 10, and 12, respectively. In fact, roughly half of these daily smokers say they smoke half-a-pack or more per day (4%, 8%, and 11% of all respondents in each grade).

- Daily use of ***smokeless tobacco*** is considerably lower than daily cigarette use, at 1.9%, 3.0%, and 3.9%.

- Daily use of ***alcohol*** is next most frequent, at all three grade levels, at 1.0%, 1.7%, and 2.9% in grades 8, 10, and 12.

- ***Marijuana*** is used on a daily or near-daily basis by about one of every thirty seniors (3.6%); many fewer tenth grade students use daily (2.2%), and only 0.7% of eighth grade students report daily use. (See the last chapter of this volume for a discussion of levels of past daily use and cumulative daily use of marijuana.)

- Less than 1% of the senior respondents report daily use of any one of the illicit drugs other than marijuana. They report 0.2% daily use of ***stimulants***, followed by a number of drug classes at 0.1% or below. While very low, these figures are not inconsequential, because 1% of the high school class of 1994 represents more than 25,000 individuals.

- ***Inhalants*** are used on a daily basis by 0.2% of eighth graders. Besides marijuana or inhalants, daily use figures for all other classes of illicit drugs are at or below 0.1% for eighth and tenth graders.

NONCONTINUATION RATES

An indication of the proportion of people who try a drug but do not continue to use it can be derived from calculating the percentage, among those who ever used a drug (once or more), who did not use it the 12 months preceding the survey.[17] We use the word "noncontinuation" rather than "discontinuation," since the latter might imply discontinuing an established pattern of use, whereas our current operational definition includes experimental users as well as established users. These noncontinuation rates are provided for all drug classes in Figure

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[17] This operationalization of noncontinuation has an inherent problem in that users of a given drug who initiate use during the past year by definition cannot be noncontinuers. Thus, the definition tends to understate the noncontinuation rate, particularly for drugs that tend to be initiated late in high school rather than in earlier years.

4 for the senior class of 1994. (Only data for seniors are presented here.) It may be seen in Figure 4 that noncontinuation rates vary widely among the different drugs.

- The highest noncontinuation rates observed are for ***inhalants*** (55%), ***heroin*** (50%), ***ice*** (47%), ***steroids*** (46%), ***tranquilizers*** (44%), and ***PCP*** and ***methaqualone*** (both at 43%). Many inhalants are used primarily at a younger age so use often is not continued into the senior year. Use of methaqualone may have declined in part because it is no longer readily available.

- By senior year, a high noncontinuation rate is found for ***cocaine*** (39%), including ***powdered cocaine*** (42%). ***Crack cocaine*** has only a slightly lower noncontinuation rate (37%). All of the ***psychotherapeutic drugs*** have noncontinuation rates near 40%.

- Because a relatively high proportion of users continue to use ***marijuana*** at some level over an extended period, it consistently has had one of the lowest noncontinuation rates (20% in 1994) in senior year of any of the illicit drugs.

- Contrary to the widespread belief that ***crack*** is almost instantly addicting, it is noteworthy that, of the seniors who have ever used crack (3.0%), only about one-fourth (0.8%) are current users and only 0.1% of the total sample are daily users. While there is no question that crack is highly addictive, the evidence here suggests that it is not usually addictive on the first use.

- The remaining ***illicit drugs*** have noncontinuation rates ranging from 33% to 42%.

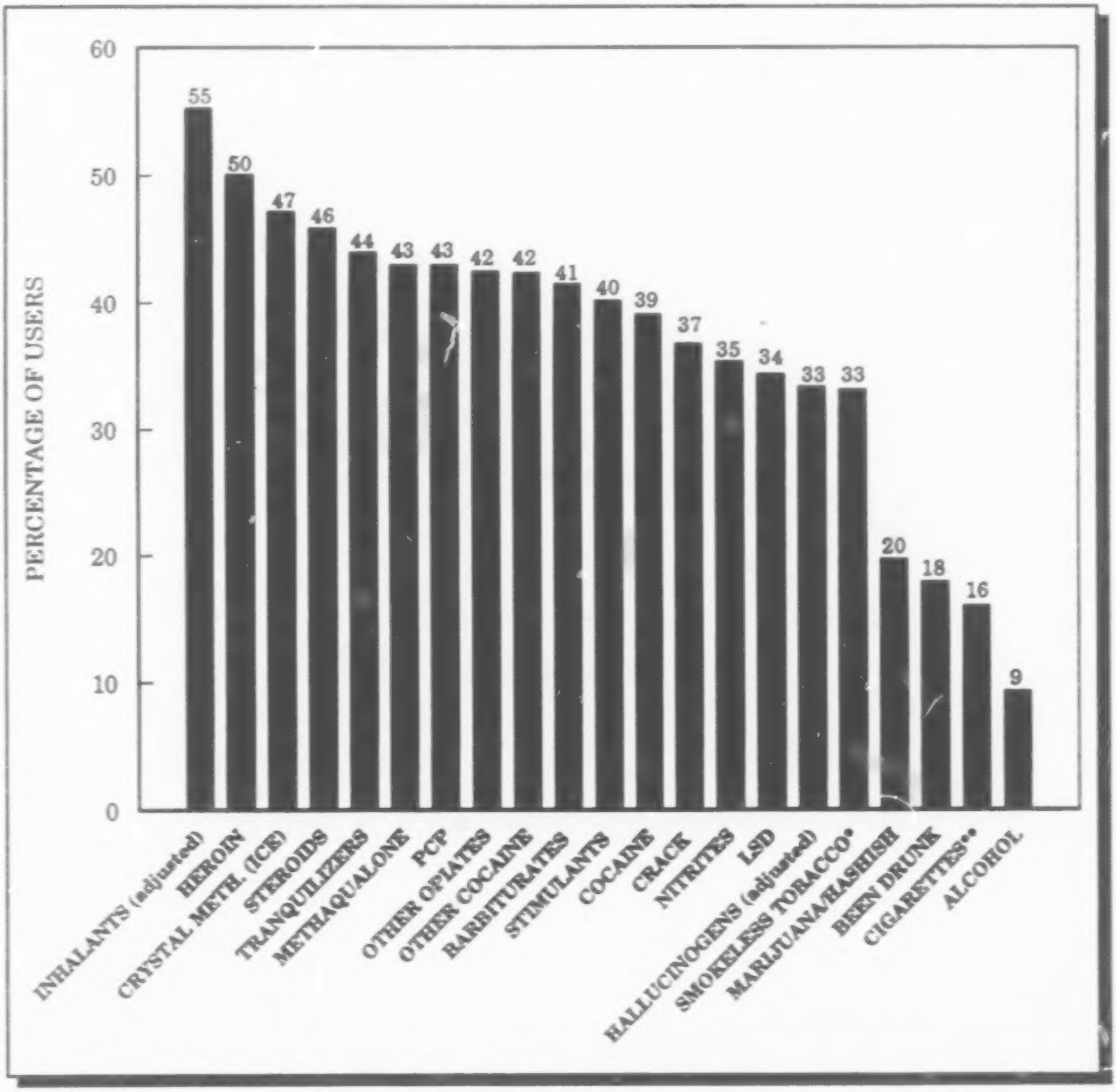
- In contrast to illicit drugs, noncontinuation rates for the two licit drugs are extremely low. ***Alcohol***, which has been tried by nearly all seniors (80%), is used in senior year by nearly all of those who have ever tried it (73% of all seniors) yielding a noncontinuation rate for alcohol of only 9%.

- Noncontinuation is defined differently for ***cigarettes***, because cigarette use in the past year is not asked of respondents. The noncontinuation rate is the percentage of those who say they ever smoked "regularly" who report not smoking at all during the past 30 days. Only 16% of seniors who say they were regular smokers have ceased active use.

- Noncontinuation is defined for ***smokeless tobacco*** much the same way as for cigarettes; it also has a relatively low rate of noncontinuation by senior year, with only 33% of the lifetime "regular" users not using in the past year.

FIGURE 4

Noncontinuation Rates: Percent of Twelfth Graders Who Used Drug Once or More in Lifetime Who Did Not Use in Past Year, 1994



*Percent of regular smokeless tobacco users (ever) who did not use smokeless tobacco in the last thirty days.
**Percent of regular smokers (ever) who did not smoke at all in the last thirty days.

PREVALENCE COMPARISONS FOR IMPORTANT SUBGROUPS

Sex Differences

In general, higher proportions of males than females are involved in illicit drug use, especially heavy drug use; however, this picture is a somewhat complicated one (see Tables 6 through 9).

- Overall the proportion of twelfth graders using ***marijuana*** is higher among males (annual prevalence of 35% vs. 26% among females), and daily use of marijuana is even more concentrated among males (5.1% vs. 2.0% for females). This is also true among eighth and tenth grade students. (See Tables 7 and 9.)

- Males have considerably higher prevalence rates on most other illicit drugs, too. The annual prevalence rates in senior year tend to be at least one and one-half to two and one-half times as high among males as among females for ***nitrites*** and the specific drugs ***LSD, PCP, heroin, cocaine, crack cocaine, inhalants***, and ***ice***. Further, males account for an even greater share of the frequent or heavy users of these various classes of drugs. For many of these drugs there is little sex difference among eighth and tenth graders. In fact, for some drugs females have slightly higher rates of use in eighth grade, including ***inhalants, stimulants, tranquilizers*** and ***other cocaine***. Thus, the sex differences in twelfth grade, with males more likely to use, seem to emerge over the course of middle to late adolescence.

- The ***nitrite inhalants*** show a particularly high sex difference among twelfth graders (1.7% for males vs. 0.4% for females).

- Twelfth grade females approach the annual prevalence rates for males in the case of ***opiates other than heroin*** and ***barbiturates***. Females have higher annual prevalence rates than males for ***stimulants*** at all grade levels (though the difference is very small in senior year). Similarly, ***tranquilizers*** are used by more females than males in grades eight and ten.

- The number of high school seniors of both sexes who report using ***some illicit drug other than marijuana*** during the last year are not substantially different (19% for males vs. 17% for females; see Figure 12 in Chapter 5). If going beyond marijuana is an important threshold point in the sequence of illicit drug use, then fairly similar proportions of both sexes were willing to cross that threshold at least once during the year. However, on the average, the female "users" take fewer types of drugs and tend to use them with less frequency than their male counterparts.

TABLE 6

Lifetime Prevalence of Use of Various Types of Drugs by Subgroups, Twelfth Graders, 1994

(Entries are percentages)

	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Crack	Other Cocaine	Heroin	Other Opiates[b]	Stimulants[b]	Crystal Meth. (Ice)	Sedatives[b]	Barbiturates[b]	Methaqualone[b]	Tranquilizers[b]	Alcohol	Been Drunk	Cigarettes	Smokeless	Steroids
Total	38.2	17.7	1.7	11.4	10.5	2.8	5.9	3.0	5.2	1.2	6.6	15.7	3.4	7.3	7.0	1.4	6.6	80.4	62.9	62.0	30.7	2.4
Sex:																						
Male	42.8	20.8	2.6	13.0	12.0	4.0	7.0	3.5	6.2	1.6	7.2	14.6	4.0	7.3	7.1	1.0	6.6	81.0	65.1	63.0	47.4	3.8
Female	33.7	14.9	0.6	9.6	9.0	1.8	4.8	2.3	4.1	0.8	5.9	16.3	2.5	7.2	6.9	1.5	6.5	80.1	60.8	60.6	15.6	0.9
College Plans:																						
None or under 4 yrs	44.6	22.1	3.3	13.6	12.8	5.0	8.9	5.0	7.7	2.1	7.8	22.2	5.3	9.7	9.4	1.5	8.0	84.3	65.3	71.2	38.1	3.1
Complete 4 yrs	35.6	16.5	1.2	10.4	9.6	2.3	4.9	2.3	4.3	0.9	6.3	13.6	2.7	6.5	6.3	1.3	6.1	79.5	61.6	59.1	28.1	2.1
Region:																						
Northeast	44.3	20.3	2.4	12.1	11.1	4.4	4.8	2.1	4.4	1.1	5.7	13.6	2.2	6.5	6.4	1.3	6.1	84.4	69.3	65.1	29.2	2.1
North Central	37.3	20.6	1.9	11.3	10.5	2.4	6.1	3.3	6.0	1.5	7.8	19.2	3.9	7.0	7.0	1.4	5.7	82.6	66.1	64.4	35.6	3.6
South	36.1	15.6	1.1	10.5	10.0	2.5	5.6	2.9	4.3	1.2	6.3	14.9	2.7	8.5	7.9	1.4	8.0	79.5	60.7	61.7	29.3	2.0
West	37.7	15.5	1.9	12.5	11.2	2.9	7.3	3.6	6.6	0.9	6.2	14.1	5.0	6.0	5.8	1.6	5.8	75.8	57.0	56.7	28.3	1.4
Population Density:																						
Large MSA	40.3	18.5	1.0	11.5	10.7	3.7	5.0	2.2	4.6	0.8	6.9	12.2	3.7	6.3	6.0	0.9	6.7	80.1	61.0	59.6	24.7	1.8
Other MSA	39.7	17.4	2.0	13.0	12.1	3.3	6.5	3.3	5.7	1.4	6.5	15.6	3.5	7.3	7.0	1.2	6.8	80.2	62.8	62.0	29.4	2.3
Non-MSA	33.2	17.8	1.6	8.0	7.2	1.4	5.4	2.9	4.7	1.2	6.5	18.4	3.1	7.8	7.7	2.2	6.2	81.2	64.6	64.0	38.2	2.8
Parental Education:[c]																						
1.0-2.0 (Low)	35.4	14.6	3.4	8.9	7.9	5.0	7.1	4.3	5.4	1.4	6.1	16.1	4.9	10.2	8.5	5.0	7.5	76.6	56.6	61.2	27.2	4.2
2.5-3.0	38.5	18.8	2.5	10.7	10.0	2.7	6.8	3.7	5.7	1.6	6.3	17.8	4.4	7.0	7.0	0.6	6.6	81.5	62.3	63.8	35.0	2.7
3.5-4.0	39.3	17.5	1.2	12.3	11.6	2.4	6.1	2.9	5.6	1.0	6.2	16.0	3.0	7.2	7.1	0.9	6.3	81.3	62.9	61.7	29.6	2.2
4.5-5.0	38.3	18.6	0.4	11.4	10.5	2.1	5.1	2.2	4.6	1.0	7.3	14.7	2.6	7.1	6.9	1.6	6.5	81.4	66.0	61.7	31.8	1.7
5.5-6.0 (High)	37.6	19.2	2.4	12.6	11.2	4.1	4.3	2.0	4.0	1.3	7.5	12.6	1.7	6.2	6.2	0.6	6.9	80.5	63.1	61.6	29.4	1.8

NOTES: Prevalence of use of each drug was included in all six questionnaire forms with the following exceptions: **Inhalants was in five forms;** other cocaine was in four forms; crystal methamphetamine (ice), steroids, and "been drunk" were in two forms; **and nitrites, PCP, methaqualone and smokeless tobacco were in one form.** The N's in Table 7 **should be adjusted accordingly** (i.e., the approximate N for inhalants is five-sixths of the 12th grade N given in Table 7).
See Table 7 for sample sizes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Only drug use which was not under doctor's orders is included here.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: **(1) Completed grade school or less, (2) Some high school,** (3) Completed high school, (4) Some college, **(5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.**

TABLE 7

Annual Prevalence of Use of Various Types of Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Approx. N			Marijuana			Inhalants[a,b]			Hallucinogens[b]			LSD			Cocaine		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*17300*	*15800*	*15400*	13.0	25.2	30.7	11.7	9.1	7.7	2.7	5.8	7.6	2.4	5.2	6.9	2.1	2.8	3.6
Sex:																		
Male	*8300*	*7700*	*6900*	15.1	28.2	35.1	11.2	9.7	9.6	3.0	6.6	9.2	2.6	5.9	8.4	2.1	3.1	4.5
Female	*8600*	*7900*	*8000*	10.9	21.9	26.4	12.2	8.6	6.0	2.4	4.8	5.8	2.1	4.3	5.3	2.1	2.5	2.8
College Plans:																		
None or under 4 yrs	*2000*	*2700*	*3400*	27.7	37.3	34.4	18.3	15.1	9.0	6.7	10.4	8.4	6.2	9.4	7.7	6.6	6.6	5.3
Complete 4 yrs	*14700*	*12800*	*11100*	11.0	22.4	29.1	10.9	7.8	7.4	2.2	4.8	7.0	1.8	4.2	6.3	1.5	2.0	3.0
Region:																		
Northeast	*3400*	*3100*	*2700*	12.1	25.6	36.0	12.0	9.8	10.3	2.9	5.8	9.0	2.6	5.1	8.2	2.2	2.4	3.1
North Central	*4200*	*4700*	*4000*	12.0	23.4	30.5	10.3	8.4	9.5	2.2	5.7	8.1	1.7	5.2	7.3	1.2	2.2	3.7
South	*6300*	*5200*	*5700*	11.4	23.8	28.7	11.3	9.0	6.2	2.4	5.1	6.7	2.1	4.6	6.3	2.5	2.6	3.4
West	*3400*	*2800*	*3000*	18.1	30.0	30.0	14.0	9.9	5.7	3.9	7.1	7.1	3.3	6.3	6.2	2.3	4.7	4.5
Population Density:																		
Large MSA	*3300*	*2900*	*3100*	11.7	25.7	33.5	11.0	8.0	8.2	2.8	6.0	8.1	2.5	5.4	7.3	2.0	2.0	3.4
Other MSA	*9400*	*8700*	*8300*	15.9	28.1	32.0	13.1	9.6	7.5	3.3	6.4	8.6	2.8	5.8	7.8	2.4	3.1	4.0
Non-MSA	*4600*	*4200*	*4000*	8.0	18.5	25.8	9.3	9.1	7.6	1.6	4.4	5.1	1.3	3.7	4.6	1.4	2.7	3.2
Parental Education:[c]																		
1.0-2.0 (Low)	*1600*	*1300*	*1400*	18.7	25.8	26.3	12.4	8.7	5.3	3.1	6.1	5.0	2.8	5.5	4.4	3.5	3.8	4.1
2.5-3.0	*4100*	*4100*	*3700*	14.5	26.3	29.7	12.1	9.5	7.8	2.8	5.5	7.0	2.6	5.1	6.5	2.3	2.9	4.0
3.5-4.0	*4200*	*4300*	*4300*	13.2	25.6	31.5	12.3	9.6	7.1	2.8	6.9	8.0	2.4	5.3	7.4	2.1	3.2	3.8
4.5-5.0	*3900*	*3700*	*3500*	10.9	23.8	32.0	11.0	8.7	8.9	2.8	5.5	7.7	2.1	4.8	6.9	1.6	2.1	3.1
5.5-6.0 (High)	*2200*	*1800*	*1800*	11.0	23.3	32.3	12.2	8.2	9.7	2.5	6.2	9.0	2.1	5.4	7.9	1.9	1.9	3.3

SOURCE: The Monitoring the Future Study, the University of Michigan

[a] 12th grade only: Data based on five of six questionnaire forms. N is five-sixths of N indicated.

[b] Unadjusted for known underreporting of certain drugs. See text for details.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

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TABLE 7 (cont.)

Annual Prevalence of Use of Various Types of Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Crack			Other Cocaine[a]			Heroin			Other Opiates[b]			Stimulants[b]			Barbiturates[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	1.3	1.4	1.9	1.7	2.4	3.0	1.2	0.9	0.6	—	—	3.8	7.9	10.2	9.4	—	—	4.1
Sex:																		
Male	1.3	1.6	2.4	1.7	2.7	3.7	1.3	1.0	0.8	—	—	4.3	6.5	8.6	9.2	—	—	4.3
Female	1.2	1.0	1.3	1.8	2.1	2.3	0.9	0.8	0.4	—	—	3.4	9.3	11.7	9.4	—	—	3.8
College Plans:																		
None or under 4 yrs	4.6	3.4	3.3	5.6	5.9	4.3	3.9	2.0	1.1	—	—	4.9	14.5	16.6	13.4	—	—	5.4
Complete 4 yrs	0.8	0.9	1.4	1.2	1.7	2.5	0.7	0.7	0.5	—	—	3.5	7.0	8.9	8.0	—	—	3.7
Region:																		
Northeast	1.4	1.4	1.5	1.9	2.0	2.8	1.3	0.6	0.7	—	—	3.5	6.9	8.7	7.4	—	—	4.0
North Central	0.9	1.0	2.2	0.9	1.8	3.5	1.1	0.9	0.9	—	—	4.7	7.8	10.5	12.0	—	—	4.1
South	1.6	1.3	1.6	2.0	2.2	2.6	1.1	1.0	0.6	—	—	3.8	8.3	11.2	9.0	—	—	4.8
West	1.3	1.9	2.3	2.0	4.3	3.5	1.1	1.2	0.4	—	—	3.1	8.4	9.4	8.4	—	—	2.8
Population Density:																		
Large MSA	1.3	0.8	1.4	1.7	1.7	2.9	1.1	0.8	0.3	—	—	4.3	6.5	7.5	7.6	—	—	3.6
Other MSA	1.4	1.4	2.0	2.0	2.7	3.3	1.2	0.9	0.8	—	—	3.7	8.6	10.6	9.3	—	—	4.2
Non-MSA	1.0	1.6	1.9	1.2	2.5	2.6	1.0	1.0	0.5	—	—	3.6	7.5	11.2	10.9	—	—	4.1
Parental Education:[c]																		
1.0-2.0 (Low)	2.8	1.9	2.7	3.1	3.1	2.7	2.0	1.3	0.9	—	—	3.0	11.2	10.8	10.4	—	—	4.5
2.5-3.0	1.4	1.1	2.2	2.0	2.6	3.2	1.1	0.8	0.8	—	—	3.8	9.0	11.6	10.3	—	—	4.5
3.5-4.0	0.9	1.5	1.8	1.9	2.7	3.4	1.3	0.9	0.4	—	—	3.4	8.5	11.1	9.4	—	—	4.0
4.5-5.0	1.1	1.0	1.1	1.1	1.8	2.6	0.8	0.9	0.3	—	—	4.3	6.6	8.9	9.5	—	—	4.0
5.5-6.0 (High)	1.4	1.1	1.8	1.2	1.6	3.1	1.3	0.9	0.9	—	—	4.8	5.7	7.3	7.1	—	—	3.6

NOTE: '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] 12th grade only: Data based on four of six questionnaire forms. N is four-sixths of N indicated.

[b] Only drug use which was not under doctor's orders is included here.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 7 (cont.)

Annual Prevalence of Use of Various Types of Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Tranquilizers[a]			Alcohol			Been Drunk[b]			Cigarettes			Smokeless Tobacco			Steroids[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	2.4	3.3	3.7	46.8	63.9	73.0	18.2	38.0	51.7	—	—	—	—	—	—	1.2	1.1	1.3
Sex:																		
Male	1.9	3.0	4.0	47.6	65.7	74.1	18.1	40.5	54.3	—	—	—	—	—	—	1.8	1.9	2.1
Female	2.8	3.6	3.5	46.2	62.3	72.1	18.3	35.4	49.0	—	—	—	—	—	—	0.6	0.4	0.5
College Plans:																		
None or under 4 yrs	5.1	6.0	4.5	61.6	74.4	76.1	33.0	51.1	53.5	—	—	—	—	—	—	2.5	2.1	1.9
Complete 4 yrs	2.0	2.8	3.5	44.9	61.7	72.2	16.4	35.3	50.4	—	—	—	—	—	—	1.0	0.9	1.1
Region:																		
Northeast	2.5	2.8	3.5	47.6	63.6	77.8	17.8	36.3	57.8	—	—	—	—	—	—	1.0	1.0	1.5
North Central	1.7	2.6	3.1	46.8	64.8	75.7	17.2	39.9	56.3	—	—	—	—	—	—	1.0	1.1	2.2
South	2.6	4.2	4.8	45.4	63.0	71.5	18.1	37.2	48.9	—	—	—	—	—	—	1.6	1.3	1.0
West	2.7	3.6	2.8	48.5	64.6	67.8	20.0	38.0	45.2	—	—	—	—	—	—	1.0	1.1	0.8
Population Density:																		
Large MSA	2.5	2.5	4.0	44.2	63.2	73.8	15.1	32.5	50.8	—	—	—	—	—	—	0.9	0.7	1.3
Other MSA	2.6	3.8	3.7	49.4	64.5	72.5	20.1	39.2	50.5	—	—	—	—	—	—	1.2	1.1	1.4
Non-MSA	1.9	3.0	3.5	43.3	63.3	73.5	16.6	39.4	54.8	—	—	—	—	—	—	1.5	1.5	1.3
Parental Education:[c]																		
1.0-2.0 (Low)	3.2	4.2	4.2	54.0	64.3	67.9	24.5	38.7	43.7	—	—	—	—	—	—	1.6	1.8	2.8
2.5-3.0	2.6	3.3	3.5	49.7	67.7	72.8	19.6	41.0	49.0	—	—	—	—	—	—	1.6	0.9	1.7
3.5-4.0	2.6	3.4	3.6	49.4	66.0	73.6	19.5	40.1	50.3	—	—	—	—	—	—	1.3	0.8	1.1
4.5-5.0	2.0	2.9	3.7	43.1	61.0	75.4	16.3	35.2	57.2	—	—	—	—	—	—	0.8	1.4	0.6
5.5-6.0 (High)	2.1	3.4	4.2	44.6	58.4	74.3	15.8	33.8	54.5	—	—	—	—	—	—	0.9	1.1	1.2

NOTE: '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Only drug use not under a doctor's orders is included here.

[b] 12th grade only. Data based on two of six questionnaire forms. N is two-sixths of N indicated.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 8

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Approx N			Marijuana			Inhalants[a,b]			Hallucinogens[b]			LSD			Cocaine		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*17300*	*15800*	*15400*	7.8	15.8	19.0	5.6	3.6	2.7	1.3	2.4	3.1	1.1	2.0	2.6	1.0	1.2	1.5
Sex:																		
Male	*8300*	*7700*	*6900*	9.5	18.6	23.0	5.4	3.9	3.6	1.5	3.0	4.3	1.2	2.5	3.6	1.2	1.4	1.9
Female	*8600*	*7900*	*8000*	6.0	12.8	15.1	5.8	3.3	1.9	1.0	1.7	1.7	0.9	1.5	1.6	0.9	0.9	1.1
College Plans:																		
None or under 4 yrs	*2000*	*2700*	*3400*	19.7	25.8	21.6	10.4	6.4	3.0	3.5	5.1	3.7	2.9	4.3	3.5	3.8	3.0	2.4
Complete 4 yrs	*14700*	*12800*	*11100*	6.1	13.6	17.7	5.0	3.0	2.6	1.0	1.8	2.7	0.8	1.5	2.2	0.7	0.8	1.1
Region:																		
Northeast	*3400*	*3100*	*2700*	7.7	16.9	22.7	6.1	4.0	3.9	1.5	2.0	4.4	1.3	1.6	3.2	1.2	1.0	1.3
North Central	*4200*	*4700*	*4000*	7.3	15.3	19.3	4.7	3.1	3.6	0.9	2.5	3.7	0.8	2.2	3.3	0.6	0.9	1.7
South	*6300*	*5200*	*5700*	6.6	14.8	17.3	[illegible]	3.8	2.1	1.1	2.3	2.2	0.9	2.0	2.1	1.2	1.2	1.3
West	*3400*	*2800*	*3000*	10.9	17.3	18.6	7.0	3.8	1.7	1.9	2.9	2.7	1.4	2.4	2.1	1.2	1.8	1.6
Population Density:																		
Large MSA	*3300*	*2900*	*3100*	6.8	17.2	21.6	4.9	3.6	2.8	1.4	2.9	3.3	1.2	2.5	2.7	1.0	0.8	1.3
Other MSA	*9400*	*8700*	*8300*	9.9	17.5	19.7	6.6	3.7	2.8	1.5	2.4	3.7	1.3	2.1	3.1	1.3	1.3	1.6
Non-MSA	*4600*	*4200*	*4000*	4.3	11.4	15.7	4.2	3.5	2.6	0.8	2.1	1.7	0.5	1.7	1.4	0.5	1.3	1.3
Parental Education:[c]																		
1.0-2.0 (Low)	*1600*	*1300*	*1400*	12.4	15.8	14.0	6.3	3.2	2.3	1.0	2.1	2.1	0.8	1.5	1.6	1.7	1.7	1.8
2.5-3.0	*4100*	*4100*	*3700*	9.0	16.3	18.5	5.6	3.7	3.2	1.3	2.1	3.0	1.2	1.7	2.6	1.1	1.0	1.7
3.5-4.0	*4200*	*4300*	*4300*	7.8	15.8	19.3	6.0	3.8	2.1	1.4	2.5	3.3	1.1	2.3	2.9	1.1	1.4	1.6
4.5-5.0	*3900*	*3700*	*3500*	6.0	15.0	20.4	5.6	3.3	3.0	1.4	2.4	2.9	1.1	2.0	2.3	0.6	0.8	0.9
5.5-6.0 (High)	*2200*	*1800*	*1800*	5.8	15.5	20.3	5.5	3.6	3.5	1.0	2.9	3.5	0.9	2.2	2.7	1.1	0.9	1.2

SOURCE: The Monitoring the Future Study, the University of Michigan

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[a] 12th grade only. Data based on five of six questionnaire forms. N is five-sixths of N indicated.

[b] Unadjusted for known underreporting of certain drugs. See text for details.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 8 (cont.)

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Crack			Other Cocaine[a]			Heroin			Other Opiates[b]			Stimulants[b]			Barbiturates[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	0.7	0.6	0.8	0.9	1.0	1.3	0.6	0.4	0.3	—	—	1.5	3.6	4.5	4.0	—	—	1.7
Sex:																		
Male	0.7	0.8	1.1	0.9	1.1	1.5	0.8	0.5	0.4	—	—	1.8	2.9	3.8	4.1	—	—	2.0
Female	0.6	0.5	0.5	0.8	0.7	1.0	0.3	0.3	0.2	—	—	1.2	4.3	5.1	3.8	—	—	1.4
College Plans:																		
None or under 4 yrs	2.7	1.9	1.5	3.3	2.5	2.2	2.0	1.0	0.5	—	—	2.0	7.5	8.1	5.8	—	—	2.4
Complete 4 yrs	0.4	0.4	0.5	0.5	0.6	0.9	0.3	0.3	0.2	—	—	1.3	3.1	3.8	3.5	—	—	1.5
Region:																		
Northeast	0.8	0.6	0.7	1.0	0.8	1.2	0.8	0.1	0.4	—	—	1.2	3.5	3.6	3.4	—	—	2.0
North Central	0.4	0.5	0.9	0.4	0.8	1.8	0.5	0.5	0.4	—	—	2.0	3.6	4.5	5.2	—	—	1.5
South	0.7	0.7	0.7	1.0	1.0	1.0	0.5	0.5	0.3	—	—	1.5	3.7	5.0	3.6	—	—	1.9
West	0.7	0.8	1.1	1.0	1.6	1.0	0.5	0.4	0.1	—	—	1.1	3.6	4.7	4.0	—	—	1.3
Population Density:																		
Large MSA	0.8	0.5	0.6	0.9	0.6	0.9	0.7	0.5	0.1	—	—	1.7	3.3	3.2	3.4	—	—	1.7
Other MSA	0.8	0.7	1.0	1.1	1.0	1.4	0.6	0.4	0.4	—	—	1.5	4.0	4.8	3.9	—	—	1.8
Non-MSA	0.2	0.7	0.7	0.5	1.1	1.2	0.4	0.4	0.2	—	—	1.3	2.9	4.9	4.9	—	—	1.5
Parental Education:[c]																		
1.0-2.0 (Low)	1.2	0.7	1.6	1.4	1.5	1.4	0.9	0.6	0.6	—	—	1.1	5.3	4.7	4.2	—	—	1.9
2.5-3.0	0.8	0.4	1.0	0.9	0.8	1.4	0.5	0.3	0.5	—	—	1.5	3.8	5.1	4.6	—	—	2.2
3.5-4.0	0.5	0.6	0.7	0.9	1.1	1.5	0.6	0.3	0.1	—	—	1.3	4.1	4.9	4.4	—	—	1.4
4.5-5.0	0.4	0.6	0.4	0.5	0.7	0.7	0.4	0.4	0.1	—	—	1.6	2.9	3.9	3.6	—	—	1.5
5.5-6.0 (High)	0.7	0.5	0.7	0.7	0.6	1.2	0.8	0.4	0.3	—	—	1.8	2.4	3.2	2.6	—	—	1.6

NOTE: '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 12th grade only: Data based on four questionnaire forms. N is four-sixths of N indicated.

[b] Only drug use which was not under doctor's orders is included here.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 8 (cont.)

Thirty-Day Prevalence of Use of Various Types of Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

	Tranquilizers[a]			Alcohol			Been Drunk[b]			Cigarettes			Smokeless Tobacco[c]			Steroids[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	1.1	1.5	1.4	25.5	39.2	50.1	8.7	20.3	30.8	18.6	25.4	31.2	7.7	10.5	11.1	0.5	0.6	0.9
Sex:																		
Male	1.0	1.2	1.7	26.5	43.5	55.5	9.0	23.2	34.5	19.3	26.6	32.9	12.8	19.2	20.3	0.9	1.0	1.2
Female	1.3	1.7	1.1	24.7	34.8	45.2	8.3	17.2	26.8	17.9	23.9	29.2	2.4	2.1	2.6	0.2	0.2	0.3
College Plans:																		
None or under 4 yrs	2.4	2.6	1.6	41.4	52.0	53.6	20.0	31.1	32.2	36.6	42.2	40.9	16.7	19.9	15.8	1.3	1.3	1.4
Complete 4 yrs	0.9	1.3	1.3	23.6	36.4	48.9	7.3	18.0	29.4	16.1	21.7	28.0	6.5	8.5	9.3	0.4	0.4	0.7
Region:																		
Northeast	1.3	1.1	1.4	25.4	37.4	53.1	8.2	19.0	35.2	17.8	24.5	33.2	6.1	9.0	12.0	0.3	0.6	1.5
North Central	0.8	1.2	1.3	24.2	39.6	53.8	8.3	21.0	34.1	18.5	28.8	36.2	7.1	10.0	14.7	0.5	0.5	1.3
South	1.2	2.1	1.7	25.6	40.5	49.2	8.8	20.9	29.1	19.5	25.7	30.7	9.9	11.7	9.7	0.7	0.6	0.6
West	1.2	1.3	1.0	27.2	38.2	44.2	9.6	19.5	25.4	18.0	20.1	24.0	6.0	10.9	8.5	0.6	0.6	0.3
Population Density:																		
Large MSA	1.2	0.8	1.6	22.8	36.8	49.8	7.2	16.2	29.7	14.7	23.5	29.3	5.1	5.9	7.5	0.6	0.4	1.0
Other MSA	1.2	1.8	1.4	27.3	39.4	49.1	9.6	20.9	29.4	20.4	25.4	30.7	6.0	10.4	10.8	0.5	0.6	0.9
Non-MSA	0.9	1.5	1.3	23.8	40.6	52.5	7.9	21.8	34.4	17.8	26.7	33.8	13.0	13.9	14.7	0.6	0.8	0.6
Parental Education:[d]																		
1.0-2.0 (Low)	1.2	1.8	1.9	33.5	38.6	43.5	12.5	20.0	25.7	26.1	26.4	26.2	8.9	9.4	12.3	0.6	1.1	2.5
2.5-3.0	1.0	1.4	1.4	27.4	41.5	49.9	9.3	21.2	30.3	20.6	29.1	32.8	8.4	12.5	12.9	0.8	0.5	1.2
3.5-4.0	1.1	1.4	1.2	26.7	40.6	50.1	9.3	22.1	29.9	20.1	26.0	31.4	8.7	10.2	9.8	0.6	0.4	0.5
4.5-5.0	1.1	1.6	1.4	22.6	37.7	52.6	7.5	18.7	33.5	14.9	22.6	32.0	6.1	9.8	11.1	0.3	0.6	0.2
5.5-6.0 (High)	1.2	1.6	1.5	23.6	35.4	52.2	7.6	17.9	30.7	15.1	20.7	30.4	6.8	8.9	10.2	0.5	0.6	1.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Only drug use not under a doctor's orders is included here.

[b] 12th grade only. Data based on two of six questionnaire forms. N is two-sixths of N indicated.

[c] Data based on one questionnaire form. N is one-half of N indicated for 8th and 10th graders and one-sixth of N indicated for 12th graders.

[d] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 9

Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Tobacco by Subgroups Eighth, Tenth, and Twelfth Graders, 1994

	Percent who used daily in last thirty days																	
	Marijuana			Alcohol						Cigarettes						Smokeless Tobacco[a]		
	Daily			Daily			5+ drinks[b]			One or more daily			Half-pack or more daily			Daily		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	0.7	2.2	3.6	1.0	1.7	2.9	14.5	23.6	28.2	8.8	14.6	19.4	3.6	7.6	11.2	1.9	3.0	3.9
Sex:																		
Male	1.0	3.1	5.1	1.2	2.5	4.8	16.0	28.5	37.0	9.5	15.2	20.4	4.2	8.2	12.7	3.2	5.9	7.2
Female	0.5	1.2	2.0	0.7	0.8	1.2	13.0	18.7	20.2	8.0	13.7	18.1	2.9	6.7	9.5	0.3	0.2	0.3
College Plans:																		
None or under 4 yrs	2.1	5.5	4.9	2.8	3.6	4.4	29.3	36.4	34.0	22.6	28.9	29.8	11.7	18.5	19.6	5.4	6.5	6.6
Complete 4 yrs	0.5	1.4	2.9	0.7	1.2	2.4	12.5	20.8	26.3	6.8	11.5	15.7	2.4	5.2	8.2	1.4	2.2	2.8
Region:																		
Northeast	0.8	2.5	4.1	1.0	0.9	3.0	12.6	21.3	29.2	8.6	14.1	21.3	3.7	7.8	12.2	0.8	3.0	4.5
North Central	0.7	2.0	4.1	0.7	1.7	3.1	13.7	24.8	31.9	9.4	16.9	23.8	3.9	8.3	15.3	1.4	2.4	4.7
South	0.6	2.2	3.0	1.3	2.3	3.0	14.9	24.6	26.9	9.4	15.5	19.3	3.9	8.7	10.8	3.3	3.3	3.5
West	1.1	2.1	3.3	0.7	1.6	2.5	16.5	22.5	24.5	7.4	9.7	12.4	2.6	4.2	5.9	0.9	3.6	3.2
Population Density:																		
Large MSA	0.7	2.2	3.9	0.7	1.4	2.7	11.8	19.8	26.7	6.1	12.9	18.1	2.8	6.2	10.5	0.9	1.0	1.9
Other MSA	0.9	2.2	3.8	0.9	1.6	2.7	15.5	23.5	27.1	9.4	14.8	18.9	3.9	8.0	10.3	0.9	3.1	3.4
Non-MSA	0.5	2.0	2.8	1.3	2.1	3.6	14.4	26.8	31.5	9.6	15.5	21.6	3.7	7.8	13.7	4.6	4.2	6.7
Parental Education:[c]																		
1.0-2.0 (Low)	0.8	2.0	2.3	1.5	1.9	2.3	20.4	25.5	24.0	13.0	15.5	16.9	5.1	8.1	9.5	3.0	3.2	6.6
2.5-3.0	0.8	2.6	3.8	0.9	1.9	3.4	17.1	25.7	28.5	11.3	17.6	22.4	4.9	10.1	13.7	2.7	3.8	3.8
3.5-4.0	1.1	2.4	3.6	1.0	1.7	2.5	14.8	24.7	28.4	8.9	15.9	18.9	3.4	8.0	11.0	1.9	3.0	3.3
4.5-5.0	0.5	1.8	3.6	0.9	1.3	2.8	11.8	21.7	29.3	6.1	11.5	18.7	2.6	5.4	10.4	1.1	2.7	3.9
5.5-6.0 (High)	0.5	1.0	3.1	0.9	1.2	3.1	11.2	19.3	29.0	5.8	9.6	17.3	2.2	4.0	8.8	0.7	1.7	2.7

NOTE: See Table 8 for sample sizes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Data based on one questionnaire form. N is one-half of N indicated for the 8th and 10th grades and one-sixth of N indicated for the 12th grade.

[b] This measure refers to use of five or more drinks in a row in the past two weeks.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

- The use of ***anabolic steroids*** is heavily concentrated in the male population, with use among senior males at 2.1% in the past year compared to 0.5% among females. In eighth grade the difference is 1.8% vs. 0.6%.

- Frequent use of ***alcohol*** tends to be disproportionately concentrated among males. ***Daily use***, for example, is reported by 4.8% of the senior males vs. only 1.2% of the senior females—a ratio of four to one. Also, males are more likely than females to drink large quantities of alcohol in a single sitting; 37% of senior males report drinking ***five or more drinks in a row*** in the prior two weeks vs. 20% of senior females.[18] These sex differences are observable at all three grade levels, but they are considerably larger among the older students.

- In recent years, ***smoking rates*** among seniors have been similar for males and females. In 1994, slightly more twelfth grade males report ***daily smoking*** in the past month (20% vs. 18% for females), as well as smoking ***half-pack or more per day*** (12.7% for males vs. 9.5% for females). Males are more likely to be heavy smokers in the lower grades, as well, but the daily smoking rates are fairly close for the two sexes.

- ***Smokeless tobacco*** is used almost exclusively by males. While 20% of the twelfth grade males reported some use in the prior month, only 3% of the females did. Rates of daily use by males are 3.2% among eighth graders, 5.9% among tenth graders, and 7.2% among twelfth graders. The comparable statistics for females are only 0.3%, 0.2%, and 0.3%.

Differences Related to College Plans

Overall, students who say they probably or definitely will complete four years of college (referred to here as the "college-bound") have lower rates of illicit drug use than those who say they probably or definitely will not. (See Tables 6 through 9 and Figure 13 in Chapter 5). It is interesting to note that while the great majority of students at all three grade levels expect to complete college (see Table 7), the proportion decreases as grade level increases, even though the lower grades contain 15%-20% who will eventually drop out of high school.

For any given drug, the differences between these two self-identified groups of college- or noncollege-bound students tend to be greatest in the eighth grade. This could reflect an earlier age of onset for the noncollege-bound, and/or the fact that fewer of the eventual dropouts have left school yet, thus increasing the differences in the lower grades.

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[18] Because females tend to weigh less than males, and may metabolize alcohol somewhat differently, the same amount of ingested alcohol would, on average, lead to higher blood alcohol concentrations for females, compared to males. Therefore, the difference in terms of a fixed number of drinks, such as five or more drinks, may not reflect the difference in intoxication rates. The difference in self-reported prevalence of drunkenness among seniors is 8% (35% for males and 27% for females, 30-day), which is half the 17% difference in having five or more drinks in a row (37% vs. 20%).

- Annual ***marijuana*** use is reported by 29% of the college-bound seniors vs. 34% of the noncollege-bound, but among eighth graders it is reported by only 11% of the college-bound vs. 28% of the noncollege-bound.

- Among 1994 seniors who reported using ***any illicit drug other than marijuana*** in the past year, 16% of the college-bound reported any such behavior in the prior year vs. 23% of the noncollege-bound.

- Frequent use of many of these illicit drugs shows even larger contrasts related to college plans (see Table 9). ***Daily marijuana*** use among seniors, for example, is 1.7 times as high among those who do not plan to attend college (4.9%) as among the college-bound (2.9%). Among eighth and tenth graders it is four times as high.

- Frequent alcohol use is also more prevalent among the noncollege-bound. For example, ***daily drinking*** is reported by 4.4% of the noncollege-bound seniors vs. 2.4% of the college-bound seniors. ***Binge drinking*** (five or more drinks in a row at least once during the preceding two weeks) is reported by 34% of the noncollege-bound seniors vs. 26% of the college-bound. On the other hand, there are very small differences between the college-bound and noncollege-bound seniors in lifetime, annual, or monthly prevalence of alcohol use. It is not so much drinking, but rather frequent and heavy drinking, which tends to differentiate these two groups.

- At all three grade levels, somewhat higher proportions of noncollege-bound students use ***steroids*** compared to college-bound students. Annual use rates for the former are 2.5%, 2.1%, and 1.9%, respectively, for grades 8, 10, and 12. Among college-bound students, the corresponding rates are 1.0%, 0.9%, and 1.1%.

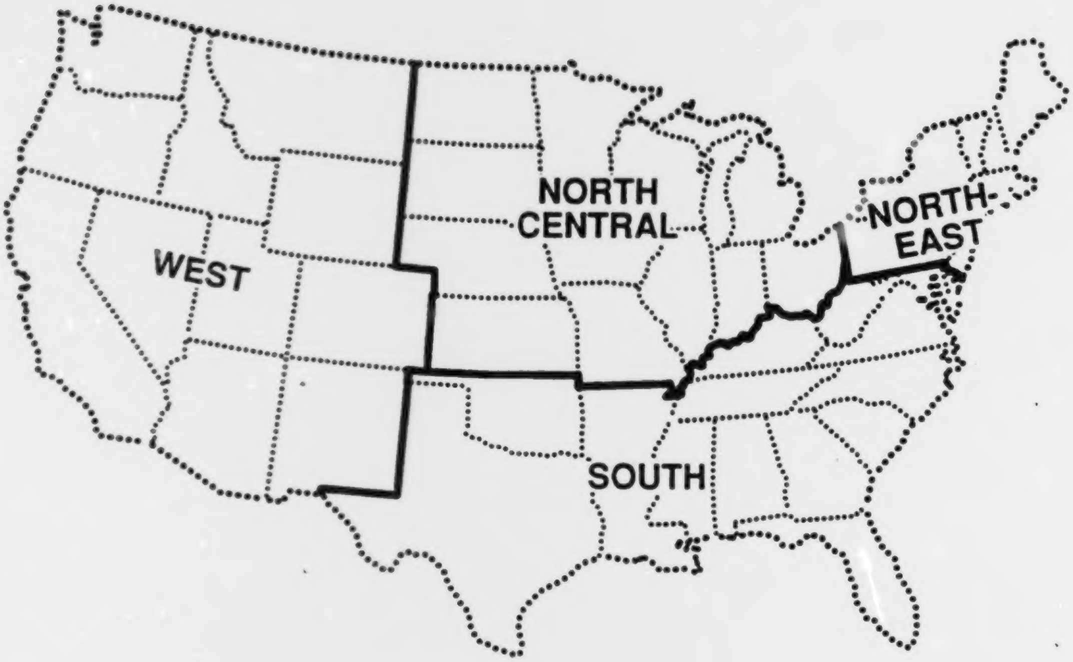
- By far, the largest and most dramatic difference in substance use between the college- and noncollege-bound involves ***cigarette*** smoking, with 8% of the college-bound seniors smoking ***half-a-pack or more daily*** compared with 20% of the noncollege-bound seniors. The proportional differences are even larger in the lower grades: 2.4% vs. 11.7% in eighth grade and 5.2% vs. 18.5% in tenth grade. (The absence of dropouts in twelfth grade undoubtedly reduces the ratio, since dropouts have a particularly high rate of smoking.)

Regional Differences

Notable regional differences in rates of illicit drug use among high school seniors may be observed in Tables 6 through 9, and Figure 14a in Chapter 5. See Figure 5 for a ***regional division*** map of the states included in the four regions of the country as defined by the Census Bureau.

FIGURE 5

States Included in the Four Regions of the Country



These are the four major regions of the country as defined by the U.S. Bureau of the Census.

- In 1994, the overall rate of illicit drug use is similar among the regions: the highest rate is in the Northeast, where 39% of seniors say they have ***used an illicit drug in the past year***, followed by the North Central (37%) and the West (35%). The South continues to have the lowest rate with 34% of the seniors reporting any illicit drug during the year (see Figure 14a in Chapter 5).

- There are very modest, but consistent regional variations in terms of the percentage of seniors using some ***illicit drug other than marijuana*** in the past year. The North Central region is highest on this index (20%) followed by the other three regions (all at 17%).

- Among twelfth graders, there generally has been little difference in ***marijuana*** use among the regions, except that the South has typically been lower than the other three. For the younger students, the West is generally somewhat higher than the other three regions. In 1994, annual prevalence among eighth graders in the West is 18%, compared to 11%-12% in the others.

- In the past, regional differences in ***cocaine*** use have been the largest observed. The West has tended to rank relatively high in the use of an ***illicit drug other than marijuana***, due in part to a high level of cocaine use. Currently, the annual prevalence of ***cocaine*** and ***crack*** is highest in the West for tenth and twelfth grade levels. For eighth graders, the differences are small, but the North Central shows the lowest rates.

- Other specific illicit substances vary in the extent to which they show regional variation, as Table 7 illustrates for the annual prevalence measure. In addition to having the highest levels of ***cocaine***, ***crack***, and ***other cocaine*** use for tenth and twelfth graders, the West also ranks first among the regions in eighth and tenth graders' use of ***marijuana, inhalants***, and ***LSD***.

- There consistently has been a large regional difference in the use of ***ice***. The highest rate among seniors is in the West at 2.8% annual prevalence, followed by the North Central (2.3%), the South (1.2%), and the Northeast (0.9%).

- The South shows the *lowest* rates of use among seniors for annual use of ***marijuana, hallucinogens*** (unadjusted), and ***other cocaine***; but it has the highest rate of ***barbiturate*** and ***tranquilizer*** use.

- The North Central stands out for having highest usage rates among seniors of ***other cocaine, heroin, other opiates, stimulants***, ***cigarettes***, and ***steroids***.

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- The annual and 30-day prevalence rates of ***alcohol*** use among seniors are somewhat lower in the South and West than in the Northeast and North Central regions. The same is true for ***binge drinking***, though it is clearly lowest in the West, as is ***daily drinking***.
- The North Central and Northeast regions also have higher rates of ***daily smoking*** in twelfth grade (24% and 21%, respectively) than the South and the West (19% and 12%, respectively).
- In the lower grades the West also has the least amount of ***smoking***, but the differences among the other regions are small.

Differences Related to Population Density

Three levels of population density (or urbanicity) have been distinguished for analytical purposes: (1) large MSA's, which are the 28 largest Metropolitan Statistical Areas in the 1990 Census; (2) other MSA's, which are the remaining Metropolitan Statistical Areas; and (3) non-MSA's, which are the sampling areas not designated as metropolitan by the Census. See Appendix B for further detail.

In general, the differences in the use of most illicit drugs across these different sizes of community are small, reflecting how widely illicit drug use has diffused through the population. (See Tables 6 through 9.)

- In twelfth grade, annual ***marijuana*** use is lower in the non-urban areas (26%) than in the large metropolitan areas (34%), or in the other metropolitan areas (32%).
- On the other hand, ***stimulant*** use is somewhat higher among tenth and twelfth grade students in non-urban areas than in the metropolitan areas.
- In tenth and twelfth grades ***binge drinking*** is inversely related to community size. In eighth grade the other metropolitan areas have the highest rate of alcohol use, though the differences are not large (Table 9).
- ***Daily cigarette*** use is highest in the non-urban areas (Table 9) for all three grade levels, although the differences are not large.
- ***Smokeless tobacco*** use is also highest in the non-urban areas, but in this case the differences are large. Current prevalence is two to three times as high in the non-urban areas as in the most urban (e.g., for eighth graders, 30-day prevalence is 5% in the large MSA's, 6% in the other MSA's, and 13% in the non-MSA's). Daily use of smokeless tobacco is even more concentrated in the more rural areas (see Tables 8 and 9).

Differences Related to Parental Education

The best measure of family socioeconomic status available in the study is an index of parental education, which is based on the average of the educational levels reported for both parents by the respondent (or on the data for one parent, if data for both are not available). The scale values on the original questions are: (1) completed grade school or less, (2) some high school, (3) completed high school, (4) some college, (5) completed college, and (6) graduate or professional school after college. The average educational level obtained by students' parents has been rising over the years. Tables 7 and 8 give the distributions for 1994 for each grade level.

- By senior year there is rather little association with family socioeconomic status for ***most drugs***. This again speaks to the extent to which illicit drug use has permeated all social strata.

- However, an examination of Table 7 shows that in eighth grade, the lowest socioeconomic stratum (which represents less than 10% of the population) has a somewhat higher annual prevalence for nearly all drugs. Few of these relationships are ordinal: rather, the bottom category, or sometimes two categories, stand out as having higher usages rates than the others.

  Most of these differences have disappeared by tenth grade, and by twelfth grade some of these relationships have actually reversed, with the highest rate of use observed in the upper socioeconomic strata. This is true for ***marijuana, inhalants, hallucinogens,*** and ***LSD***, but *not* for ***cocaine, crack, heroin, stimulants, barbiturates***, or ***steroids***.

  The diminished socioeconomic differences by twelfth grade could be explained by the upper- and middle-class youngsters "catching up" with their more precocious peers from poor backgrounds. The difference may also be explained by the impact of dropping out, which is correlated both with social class and drug use.

- ***Daily smoking*** has an inverse ordinal relationship with parental education in eighth grade, and a nearly ordinal relationship in tenth and twelfth grades (Table 9).

- The daily use of ***smokeless tobacco*** is inversely correlated with parental education at all three grades. Thus, tobacco use in general bears a negative relationship to social class among young people.

Racial/Ethnic Differences

Racial/ethnic comparisons for blacks, Hispanics, and whites were added to this monograph series for the first time in 1991.[19] Although the design of this project did not include an oversampling of any minority groups, the large overall sample sizes at each grade level do produce fair numbers of black and Hispanic respondents each year. In the tabular data discussed here, we combine data from two adjacent years to increase the reliability of the estimates. We caution the reader that the sampling error of differences between groups is likely to be larger than would be true for other demographic and background variables such as sex or college plans, because blacks and Hispanics are more likely to be clustered by school. Table 10 gives the lifetime, annual, 30-day, and daily use statistics for the three racial/ethnic groups at all three grade levels, along with the numbers of cases upon which the estimates are based.

- Several general points can be derived from Table 10. First, for virtually ***all drugs***, licit and illicit, black *seniors* have reported lifetime and annual prevalence rates which are lower—sometimes dramatically lower—than those for white or Hispanic seniors. This is mostly true for the 30-day and daily prevalence statistics, as well, although there are a few exceptions.

- Second, the same can be said for black students in eighth and tenth grades which means that the low usage rates for blacks in twelfth grade almost certainly are not due to differential dropout rates.

- The third general point is that whites in the twelfth grade have the highest lifetime and annual prevalence rates for many drugs, including: ***marijuana, inhalants***, ***hallucinogens***, ***LSD*** specifically, ***opiates other than heroin***, ***amphetamines***, ***barbiturates***, ***tranquilizers***, and ***cigarettes***. Not all of these findings replicate at lower grade levels.

- Hispanics taken as a group, have the highest lifetime and annual prevalence rates in senior year for some particularly dangerous classes of drugs. These include ***cocaine, crack,*** and ***other cocaine***. Their rate of ***cocaine*** use is particularly high, compared to the other two racial/ethnic groups. Further, it should be remembered that Hispanics have a considerably higher dropout rate, based on Census Bureau statistics, than whites or blacks, which would tend to diminish any such differences by senior year.

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[19] We recognize that the Hispanic category is a broad one, encompassing people with various Latin American and Caribbean origins, but for the purposes of this monograph the sample sizes unfortunately are too small to differentiate among them. For a more complete treatment of racial/ethnic differences, in which additional subgroups are distinguished and males and females are examined separately within each racial/ethnic category, see Bachman, J.G., Wallace, J.M., Jr., O'Malley, P.M., Johnston, L.D., Kurth, C.L., & Neighbors, H.W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976-1989. *American Journal of Public Health, 81*, 372-377.

TABLE 10

Racial/Ethnic Comparisons of Lifetime, Annual, Thirty-Day, and Daily Prevalence of Use of Various Types of Drugs Eighth, Tenth, and Twelfth Graders

NOTE: Percentages represent averages of 1993 and 1994 data.[a]

	Marijuana			Inhalants[b,c]			Hallucinogens[c]			LSD			Cocaine			Crack		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Lifetime:																		
White	12.9	27.2	38.3	20.8	19.2	20.1	4.3	8.0	12.8	3.7	7.2	12.1	2.7	3.6	6.0	1.7	1.8	2.8
Black	13.2	22.1	29.4	11.1	8.8	6.5	1.1	1.5	1.6	1.0	1.2	1.3	1.4	1.4	1.5	1.1	1.0	1.2
Hispanic	23.3	33.5	36.6	21.6	16.9	15.2	6.3	8.6	9.8	5.7	7.5	9.0	7.5	7.9	9.9	4.2	3.5	4.1
Annual:																		
White	10.0	22.6	30.2	12.4	9.6	8.6	2.8	5.6	8.6	2.5	5.0	8.0	1.6	2.2	3.5	1.0	1.1	1.6
Black	8.9	15.3	20.7	5.3	3.3	2.4	0.6	1.1	1.2	0.5	0.9	0.9	0.7	1.0	0.9	0.5	0.8	0.9
Hispanic	18.1	25.1	25.7	12.5	9.0	5.5	4.0	5.7	5.8	3.6	5.0	5.4	4.5	4.9	5.4	2.1	1.9	2.4
30-Day:																		
White	5.6	13.4	18.4	6.0	3.7	2.8	1.3	2.3	3.3	1.0	2.0	2.9	0.7	0.9	1.3	0.4	0.5	0.6
Black	5.0	9.8	13.1	2.8	1.6	1.5	0.4	0.7	0.8	0.3	0.6	0.6	0.3	0.6	0.5	0.3	0.5	0.7
Hispanic	12.1	15.6	14.9	6.1	3.4	2.3	1.8	2.2	2.0	1.5	2.0	1.8	2.2	1.8	2.3	1.3	0.7	1.2
Daily:																		
White	0.4	1.6	3.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black	0.4	0.8	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hispanic	1.1	1.9	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE: The following sample sizes are based on the 1993 and 1994 surveys combined:

SOURCE: The Monitoring the Future Study, the University of Michigan.

Sample Sizes:	8th Grade	10th Grade	12th Grade
White	20,900	22,000	21,800
Black	5,500	3,300	3,600
Hispanic	4,000	2,800	3,100

(Table continued on next page)

TABLE 10 (cont.)

Racial/Ethnic Comparisons of Lifetime, Annual, Thirty-Day, and Daily Prevalence of Use of Various Types of Drugs Eighth, Tenth, and Twelfth Graders

NOTE: Percentages represent averages of 1993 and 1994 data.[a]

	Other Cocaine[d]			Heroin			Other Opiates[e]			Stimulants[e]			Barbiturates[e]			Tranquilizers[e]		
Grade	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Lifetime																		
White	2.2	3.3	5.3	1.5	1.4	1.2	—	—	7.4	12.4	16.2	17.9	—	—	7.5	4.2	5.8	7.2
Black	1.1	1.2	1.5	1.2	0.8	0.5	—	—	2.5	7.4	6.8	5.5	—	—	2.6	2.8	2.2	2.2
Hispanic	6.5	7.5	9.1	2.8	1.5	0.9	—	—	4.4	14.3	13.1	11.5	—	—	5.2	6.6	6.0	6.0
Annual																		
White	1.2	1.9	2.9	0.8	0.8	0.5	—	—	4.3	8.1	11.0	10.4	—	—	4.3	2.2	3.6	4.2
Black	0.6	0.9	0.8	0.6	0.6	0.3	—	—	1.5	3.9	4.0	3.4	—	—	1.5	1.2	0.9	1.1
Hispanic	4.0	4.6	5.1	1.5	0.7	0.5	—	—	2.2	8.6	7.7	6.4	—	—	2.6	3.4	3.1	2.4
30-Day																		
White	0.5	0.8	1.1	0.4	0.4	0.2	—	—	1.6	3.8	4.8	4.5	—	—	1.7	1.0	1.4	1.4
Black	0.3	0.5	0.4	0.3	0.4	0.3	—	—	0.8	2.0	2.0	1.6	—	—	0.9	0.5	0.6	0.5
Hispanic	2.0	1.6	2.1	0.7	0.3	0.3	—	—	0.9	4.1	3.0	2.8	—	—	1.1	1.4	1.0	0.8
Daily																		
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 10 (cont.)

Racial/Ethnic Comparisons of Lifetime, Annual, Thirty-Day, and Daily Prevalence of Use of Various Types of Drugs Eighth, Tenth, and Twelfth Graders

NOTE: Percentages represent averages of 1993 and 1994 data.[a]

	Alcohol			Been Drunk[f]			5+ Drinks[g]			Cigarettes			Smokeless Tobacco[h]			Steroids[f]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Lifetime:																		
White	54.7	72.0	83.1	26.4	49.7	67.5	—	—	—	46.0	58.9	65.6	21.8	33.2	36.6	1.7	1.7	2.0
Black	55.1	68.1	71.4	21.5	36.0	44.0	—	—	—	37.1	39.6	44.4	10.0	10.8	11.1	1.5	1.6	2.4
Hispanic	63.3	72.7	80.4	31.7	46.6	58.9	—	—	—	54.2	56.5	61.7	15.6	16.5	21.8	2.0	1.9	2.9
Annual:																		
White	46.6	65.4	76.6	19.0	40.8	56.7	—	—	—	—	—	—	—	—	—	1.0	1.0	1.1
Black	40.7	56.2	59.8	12.8	23.2	27.8	—	—	—	—	—	—	—	—	—	0.8	0.8	1.8
Hispanic	54.2	63.2	71.7	22.1	34.7	42.9	—	—	—	—	—	—	—	—	—	1.1	1.3	1.7
30-Day:																		
White	25.3	40.4	54.0	8.4	22.0	34.0	—	—	—	18.9	27.8	35.2	8.1	12.5	13.8	0.4	0.5	0.6
Black	19.4	29.7	33.8	5.6	10.1	14.1	—	—	—	8.7	9.8	10.9	3.2	2.3	1.9	0.5	0.5	1.3
Hispanic	33.5	37.7	45.9	10.8	17.0	23.0	—	—	—	21.3	19.4	23.6	5.0	4.3	5.4	0.6	0.7	0.8
Daily:																		
White	0.8	1.6	3.1	—	—	—	12.9	24.5	31.5	9.7	16.5	22.9	—	—	—	—	—	—
Black	1.2	1.2	2.6	—	—	—	11.8	14.0	14.4	2.6	3.8	4.9	—	—	—	—	—	—
Hispanic	1.7	1.8	3.3	—	—	—	22.3	24.2	24.3	9.0	8.1	10.6	—	—	—	—	—	—

NOTE: '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data from two years have been combined to increase subgroup sample sizes.
[b] 12th grade only: Data based on five of six questionnaire forms. N is five-sixths of N indicated.
[c] Unadjusted for known underreporting of certain drugs. See text for details.
[d] 12th grade only: Data based on four of six questionnaire forms. N is four-sixths of N indicated.
[e] Only drug use which was not under a doctor's orders is included here.
[f] 12th grade only: Data based on two of six questionnaire forms. N is two-sixths of N indicated.
[g] This measure refers to use of five or more drinks in a row in the past two weeks.
[h] Data based on one questionnaire form. N is one-half of N indicated for 8th and 10th grades and one-sixth of N indicated for 12th grade.

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- An examination of the racial/ethnic comparisons at lower grade levels shows Hispanics having higher rates of use not only on all the drugs on which they have the highest prevalence in twelfth grade but on a number of other drugs, as well. For example, in eighth grade 23% of Hispanic students report ever having used ***marijuana***, compared to 13% of both white and black students. For ***hallucinogens*** the lifetime prevalence in eighth grade for Hispanics, whites, and blacks is 6%, 4%, and 1%; for ***tranquilizers***, 7%, 4%, and 3%; for ***cigarettes***, 54%, 46%, and 37%. In other words, in eighth grade–before most dropping out occurs–Hispanics have the highest rate of use of all the drugs except smokeless tobacco; whereas by twelfth grade, whites are highest in most. Certainly the considerably higher dropout rate among Hispanics could explain this shift, and may be the most plausible explanation. Another explanation worth considering is that Hispanics may tend to start using drugs younger, but that whites catch up to, and pass them at older ages. These explanations are not mutually exclusive, of course, and to some degree both explanations may be true.

- Looking at the daily use figures, we find exceptionally large absolute and proportional differences between the three groups in their rates of ***daily cigarette smoking***. Among seniors, whites have a 23% daily smoking rate, Hispanics 11% (which may be low, in part, because of their higher dropout rate), and blacks only 5%. In fact, blacks have much lower smoking rates at all grade levels.

- ***Daily drinking*** among black seniors is somewhat lower than for whites and Hispanics, and ***daily marijuana*** use two-thirds the rate of the whites.

- Recent ***binge drinking*** is also lowest among blacks at all grade levels: in twelfth grade 32% of whites report binge drinking vs. 24% of Hispanics and only 14% of blacks. In eighth grade, Hispanics have the highest rate at 22%, compared with 13% for whites and 12% for blacks.

Chapter 5

TRENDS IN DRUG USE

The beginning of this chapter presents trends in drug use among high school seniors, comparing the twenty graduating classes of 1975 through 1994. Trends are also presented for grades 8 and 10 based on four years of survey data, 1991 through 1994. As in the previous chapter, the outcomes to be discussed include measures of lifetime use, use during the past year, use during the past month, and daily use. In addition, subgroup trends are examined for the six key demographic dimensions discussed earlier, and trends in noncontinuation rates are also examined.

TRENDS IN PREVALENCE 1975-1994: TWELFTH GRADERS

Tables 11 through 14 give trends in lifetime, annual, 30-day, and current daily prevalence of use for all drugs mentioned in this chapter, based on the past twenty graduating classes. Figures 6 through 9 provide graphic descriptions of these trends.

- The years 1978 and 1979 marked the crest of a long and dramatic rise in ***marijuana*** use among American high school students. As Tables 11 through 13 and Figure 9a illustrate, annual and 30-day prevalence of marijuana use leveled between 1978 and 1979, following a steady rise in the preceding years. In 1980, both annual and 30-day prevalence statistics dropped for the first time and continued to decline every year through 1992, except in 1985 when there was a brief pause. Then, in 1993, annual use rose sharply. Again, in 1994 it increased significantly by 5 percentage points, although at 31% it is still 20 percentage points below its all-time high of 51% in 1979. Thirty-day use also rose significantly from the 1992 level of 12% to 19% in 1994.

  Lifetime prevalence began to drop in 1981, though more gradually than annual or 30-day use.[20] Today 38% of all seniors have tried marijuana before leaving high school, up significantly from 1992 when it was 33%, but down from the peak of 60% in 1980. There have been substantial changes in the attitudes and beliefs that young people hold in relation to marijuana; and these changes appear to account for much of the long term decline in use, as well as the recent turnaround in use. (See Chapter 8 for a thorough discussion of attitudes and beliefs.)

- Of particular importance were the even sharper fluctuations which have occurred for active ***daily marijuana use*** (Table 14). Between 1975 and 1978 there was an almost two-fold increase in daily use. The proportion reporting daily use in the class of 1975 (6%) came as a surprise to many; and then that proportion rose rapidly, so that by 1978

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[20] Lifetime use declines more gradually than the annual or 30-day statistics because it reflects changes in initiation rates only, whereas annual and 30-day reflect both changes in initiation rates *and* noncontinuation rates.

TABLE 11

Long-Term Trends in Lifetime Prevalence of Various Types of Drugs for Twelfth Graders

	Percent ever used																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Approx N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	
Any Illicit Drug[a,b]	55.2	58.3	61.6	64.1	65.1	65.4	65.6	64.4	62.9	61.6	60.6	57.6	56.6	53.9	50.9	47.9	44.1	40.7	42.9	45.6	+2.7ss
Any Illicit Drug Other[a,b] *Than Marijuana*	36.2	35.4	35.8	36.5	37.4	38.7	42.8	41.1	40.4	40.3	39.7	37.7	35.8	32.5	31.4	29.4	26.9	25.1	26.7	27.6	+0.9
Marijuana/Hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.5	58.7	57.0	54.9	54.2	50.9	50.2	47.2	43.7	40.7	36.7	32.6	35.3	38.2	+2.9s
Inhalants[c]	—	10.3	11.1	12.0	12.7	11.9	12.3	12.8	13.6	14.4	15.4	15.9	17.0	16.7	17.6	18.0	17.6	16.6	17.4	17.7	+0.3
Inhalants, Adjusted[c,d]	—	—	—	—	18.2	17.3	17.2	17.7	18.2	18.0	18.1	20.1	18.6	17.5	18.6	18.5	18.0	17.0	17.7	18.3	+0.6
Amyl & Butyl Nitrites[e,f]	—	—	—	—	11.1	11.1	10.1	9.8	8.4	8.1	7.9	8.6	4.7	3.2	3.3	2.1	1.6	1.5	1.4	1.7	+0.3
Hallucinogens	16.3	15.1	13.9	14.3	14.1	13.3	13.3	12.5	11.9	10.7	10.3	9.7	10.3	8.9	9.4	9.4	9.6	9.2	10.9	11.4	+0.5
Hallucinogens, Adjusted[g]	—	—	—	—	17.7	15.6	15.3	14.3	13.6	12.3	12.1	11.9	10.6	9.2	9.9	9.7	10.0	9.4	11.3	11.7	+0.4
LSD	11.3	11.0	9.8	9.7	9.5	9.3	9.8	9.6	8.9	8.0	7.5	7.2	8.4	7.7	8.3	8.7	8.8	8.6	10.3	10.5	+0.2
PCP[e,f]	—	—	—	—	12.8	9.6	7.8	6.0	5.6	5.0	4.9	4.8	3.0	2.9	3.9	2.8	2.9	2.4	2.9	2.8	-0.1
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	16.0	16.2	16.1	17.3	16.9	15.2	12.1	10.3	9.4	7.8	6.1	6.1	5.9	-0.2
Crack[h]	—	—	—	—	—	—	—	—	—	—	—	—	5.4	4.8	4.7	3.5	3.1	2.6	2.6	3.0	+0.4
Other Cocaine[i]	—	—	—	—	—	—	—	—	—	—	—	—	14.0	12.1	8.5	8.6	7.0	5.3	5.4	5.2	-0.2
Heroin	2.2	1.8	1.8	1.6	1.1	1.1	1.1	1.2	1.2	1.3	1.2	1.1	1.2	1.1	1.3	1.3	0.9	1.2	1.1	1.2	+0.1
Other Opiates[j]	9.0	9.6	10.3	9.9	10.1	9.8	10.1	9.6	9.4	9.7	10.2	9.0	9.2	8.6	8.3	8.3	6.6	6.1	6.4	6.6	+0.2
Stimulants[b,j]	22.3	22.6	23.0	22.9	24.2	26.4	32.2	27.9	26.9	27.9	26.2	23.4	21.6	19.8	19.1	17.5	15.4	13.9	15.1	15.7	+0.6
Crystal Meth (Ice)[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.7	3.3	2.9	3.1	3.4	+0.3
Sedatives[j,l]	18.2	17.7	17.4	16.0	14.6	14.9	16.0	15.2	14.4	13.3	11.8	10.4	8.7	7.8	7.4	7.5	6.7	6.1	6.4	7.3	+0.9
Barbiturates[j]	16.9	16.2	15.6	13.7	11.8	11.0	11.3	10.3	9.9	9.9	9.2	8.4	7.4	6.7	6.5	6.8	6.2	5.5	6.3	7.0	+0.7
Methaqualone[j,l]	8.1	7.8	8.5	7.9	8.3	9.5	10.6	10.7	10.1	8.3	6.7	5.2	4.0	3.3	2.7	2.3	1.3	1.6	0.8	1.4	+0.6
Tranquilizers[j]	17.0	16.8	18.0	17.0	16.3	15.2	14.7	14.0	13.3	12.4	11.9	10.9	10.9	9.4	7.6	7.2	7.2	6.0	6.4	6.6	+0.2
Alcohol[m]	90.4	91.9	92.5	93.1	93.0	93.2	92.6	92.8	92.6	92.6	92.2	91.3	92.2	92.0	90.7	89.5	88.0	87.5	87.0	—	
																			80.0	80.4	+0.4
Been Drunk[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.4	63.4	62.5	62.9	+0.4
Cigarettes	73.6	75.4	75.7	75.3	74.0	71.0	71.0	70.1	70.6	69.7	68.8	67.6	67.2	66.4	65.7	64.4	63.1	61.8	61.9	62.0	+0.1
Smokeless Tobacco[e]	—	—	—	—	—	—	—	—	—	—	—	31.4	32.2	30.4	29.2	—	—	32.4	31.0	30.7	-0.3
Steroids[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	2.9	2.1	2.1	2.0	2.4	+0.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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Footnotes for Table 11–Table 14

[a] Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

[b] Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

[c] Data based on four questionnaire forms in 1976-1988; N is four-fifths of N indicated. Data based on five questionnaire forms in 1989-1994; N is five-sixths of N indicated.

[d] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[e] Data based on a single questionnaire form; N is one-fifth of N indicated in 1979-1988 and one-sixth of N indicated in 1989-1994.

[f] Question text changed slightly in 1987.

[g] Adjusted for underreporting of PCP. See text for details.

[h] Data based on a single questionnaire form in 1986; N is one-fifth of N indicated. Data based on two questionnaire forms in 1987-1989; N is two-fifths of N indicated in 1987-1988 and two-sixths of N indicated in 1989. Data based on six questionnaire forms in 1990-1994.

[i] Data based on a single questionnaire form in 1987-1989; N is one-fifth of N indicated in 1987-1988 and one-sixth of N indicated in 1989. Data based on four questionnaire forms in 1990-1994; N is four-sixths of N indicated.

[j] Only drug use which was not under a doctor's orders is included here.

[k] Data based on two questionnaire forms; N is two-sixths of N indicated. Steroid data based on a single questionnaire form in 1989-1990; N is one-sixth of N indicated in 1989-1990. Steroid data based on two of six questionnaire forms since 1991.

[l] Sedatives: Data based on five questionnaire forms in 1975-1988, six questionnaire forms in 1989, and one questionnaire form in 1990 (N is one-sixth of N indicated in 1990), and six questionnaire forms of data adjusted by one-form data beginning in 1991. Methaqualone: Data based on five questionnaire forms in 1975-1988, six questionnaire forms in 1989, and one questionnaire form beginning in 1990.

[m] Data based on five questionnaire forms in 1975-1988, six questionnaire forms in 1989-1992. In 1993, the question text was changed slightly in three of six questionnaire forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from the three forms using the original wording (N is three-sixths of N indicated), while the data in the lower line came from the three forms containing the revised wording (N is three-sixths of N indicated). In 1994, data based on all six questionnaire forms.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 12

Long-Term Trends in Annual Prevalence of Various Types of Drugs for Twelfth Graders

	Percent who used in last twelve months																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*16000*	*15800*	*16300*	*15400*	
Any Illicit Drug[a,b]	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5	29.4	27.1	31.0	35.8	+4.8sss
Any Illicit Drug Other[a,b] *Than Marijuana*	26.2	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9	16.2	14.9	17.1	18.0	+0.9
Marijuana/Hashish	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	23.9	21.9	26.0	30.7	+4.7sss
Inhalants[c]	—	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9	6.6	6.2	7.0	7.7	+0.7
Inhalants, Adjusted[c,d]	—	—	—	—	8.9	7.9	6.1	6.6	6.2	7.2	7.5	8.9	8.1	7.1	6.9	7.5	6.9	6.4	7.4	8.2	+0.8
Amyl/Butyl Nitrites[e,f]	—	—	—	—	6.5	5.7	3.7	3.6	3.6	4.0	4.0	4.7	2.6	1.7	1.7	1.4	0.9	0.5	0.9	1.1	+0.2
Hallucinogens	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9	5.8	5.9	7.4	7.6	+0.2
Hallucinogens, Adjusted[g]	—	—	—	—	11.8	10.4	10.1	9.0	8.3	7.3	7.6	7.6	6.7	5.8	6.2	6.0	6.1	6.2	7.8	7.8	0.0
LSD	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4	5.2	5.6	6.8	6.9	+0.1
PCP[e,f]	—	—	—	—	7.0	4.4	3.2	2.2	2.6	2.3	2.9	2.4	1.3	1.2	2.4	1.2	1.4	1.4	1.4	1.6	+0.2
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	3.5	3.1	3.3	3.6	+0.3
Crack[h]	—	—	—	—	—	—	—	—	—	—	—	4.1	3.9	3.1	3.1	1.9	1.5	1.5	1.5	1.9	+0.4
Other Cocaine[i]	—	—	—	—	—	—	—	—	—	—	—	—	9.8	7.4	5.2	4.6	3.2	2.6	2.9	3.0	+0.1
Heroin	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.6	+0.1
Other Opiates[j]	5.7	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5	3.5	3.3	3.6	3.8	+0.2
Stimulants[b,j]	16.2	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1	8.2	7.1	8.4	9.4	+1.0
Crystal Meth. (Ice)[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.4	1.3	1.7	1.8	+0.1
Sedatives[j,l]	11.7	10.7	10.8	9.9	9.9	10.3	10.5	9.1	7.9	6.6	5.8	5.2	4.1	3.7	3.7	3.6	3.6	2.9	3.4	4.2	+0.8s
Barbiturates[j]	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4	3.4	2.8	3.4	4.1	+0.7s
Methaqualone[j,l]	5.1	4.7	5.2	4.9	5.9	7.2	7.6	6.8	5.4	3.8	2.8	2.1	1.5	1.3	1.3	0.7	0.5	0.6	0.2	0.8	+0.6s
Tranquilizers[j]	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5	3.6	2.8	3.5	3.7	+0.2
Alcohol[m]	84.8	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	84.5	85.7	85.3	82.7	80.6	77.7	76.8	76.0	—	—
																			72.7	73.0	+0.3
Been Drunk[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	52.7	50.3	49.6	51.7	+2.1
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7	1.4	1.1	1.2	1.3	+0.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
See Table 11 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 13

Long-Term Trends in Thirty-Day Prevalence of Various Types of Drugs for Twelfth Graders

	Percent who used in last thirty days																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	
Any Illicit Drug[a,b]	30.7	34.2	37.6	38.9	38.9	37.2	36.9	32.5	30.5	29.2	29.7	27.1	24.7	21.3	19.7	17.2	16.4	14.4	18.3	21.9	+3.6sss
Any Illicit Drug Other[a,b] *Than Marijuana*	15.4	13.9	15.2	15.1	16.8	18.4	21.7	17.0	15.4	15.1	14.9	13.2	11.6	10.0	9.1	8.0	7.1	6.3	7.9	8.8	+0.9
Marijuana/Hashish	27.1	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0	13.8	11.9	15.5	19.0	+3.5sss
Inhalants[c]	—	0.9	1.3	1.5	1.7	1.4	1.5	1.5	1.7	1.9	2.2	2.5	2.8	2.6	2.3	2.7	2.4	2.3	2.5	2.7	+0.2
Inhalants, Adjusted[c,d]	—	—	—	—	3.2	2.7	2.5	2.5	2.5	2.6	3.0	3.2	3.5	3.0	2.7	2.9	2.6	2.5	2.8	2.9	+0.1
Amyl/Butyl Nitrites[e,f]	—	—	—	—	2.4	1.8	1.4	1.1	1.4	1.4	1.6	1.3	1.3	0.6	0.6	0.6	0.4	0.3	0.6	0.4	-0.2
Hallucinogens	4.7	3.4	4.1	3.9	4.0	3.7	3.7	3.4	2.8	2.6	2.5	2.5	2.5	2.2	2.2	2.2	2.2	2.1	2.7	3.1	+0.4
Hallucinogens, Adjusted[e]	—	—	—	—	5.3	4.4	4.5	4.1	3.5	3.2	3.8	3.5	2.8	2.3	2.9	2.3	2.4	2.3	3.3	3.2	-0.1
LSD	2.3	1.9	2.1	2.1	2.4	2.3	2.5	2.4	1.9	1.5	1.6	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.4	2.6	+0.2
PCP[e,f]	—	—	—	—	2.4	1.4	1.4	1.0	1.3	1.0	1.6	1.3	0.6	0.3	1.4	0.4	0.5	0.6	1.0	0.7	-0.3
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	5.0	4.9	5.8	6.7	6.2	4.3	3.4	2.8	1.9	1.4	1.3	1.3	1.5	+0.2
Crack[h]	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.6	1.4	0.7	0.7	0.6	0.7	0.8	+0.1
Other Cocaine[i]	—	—	—	—	—	—	—	—	—	—	—	—	4.1	3.2	1.9	1.7	1.2	1.0	1.2	1.3	+0.1
Heroin	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	+0.1
Other Opiates[j]	2.1	2.0	2.8	2.1	2.4	2.4	2.1	1.8	1.8	1.8	2.3	2.0	1.8	1.6	1.6	1.5	1.1	1.2	1.3	1.5	+0.2
Stimulants[b,j]	8.5	7.7	8.8	8.7	9.9	12.1	15.8	10.7	8.9	8.3	6.8	5.5	5.2	4.6	4.2	3.7	3.2	2.8	3.7	4.0	+0.3
Crystal Meth. (Ice)[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.6	0.5	0.6	0.7	+0.1
Sedatives[j,l]	5.4	4.5	5.1	4.2	4.4	4.8	4.6	3.4	3.0	2.3	2.4	2.2	1.7	1.4	1.6	1.4	1.5	1.2	1.3	1.8	+0.5s
Barbiturates[j]	4.7	3.9	4.3	3.2	3.2	2.9	2.6	2.0	2.1	1.7	2.0	1.8	1.4	1.2	1.4	1.3	1.4	1.1	1.3	1.7	+0.4s
Methaqualone[j,l]	2.1	1.6	2.3	1.9	2.3	3.3	3.1	2.4	1.8	1.1	1.0	0.8	0.6	0.5	0.6	0.2	0.2	0.4	0.1	0.4	+0.3
Tranquilizers[j]	4.1	4.0	4.6	3.4	3.7	3.1	2.7	2.4	2.5	2.1	2.1	2.1	2.0	1.5	1.3	1.2	1.4	1.0	1.2	1.4	+0.2
Alcohol[m]	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0	51.3	51.0	—	—
																			48.6	50.1	+1.5
Been Drunk[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.6	29.9	28.9	30.8	+1.9
Cigarettes	36.7	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4	28.3	27.8	29.9	31.2	+1.3
Smokeless Tobacco[n]	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—	—	11.4	10.7	11.1	+0.4
Steroids[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.8	0.6	0.7	0.9	+0.2

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
See Table 11 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 14

Long-Term Trends in Thirty-Day Prevalence of Daily Use of Various Types of Drugs for Twelfth Graders

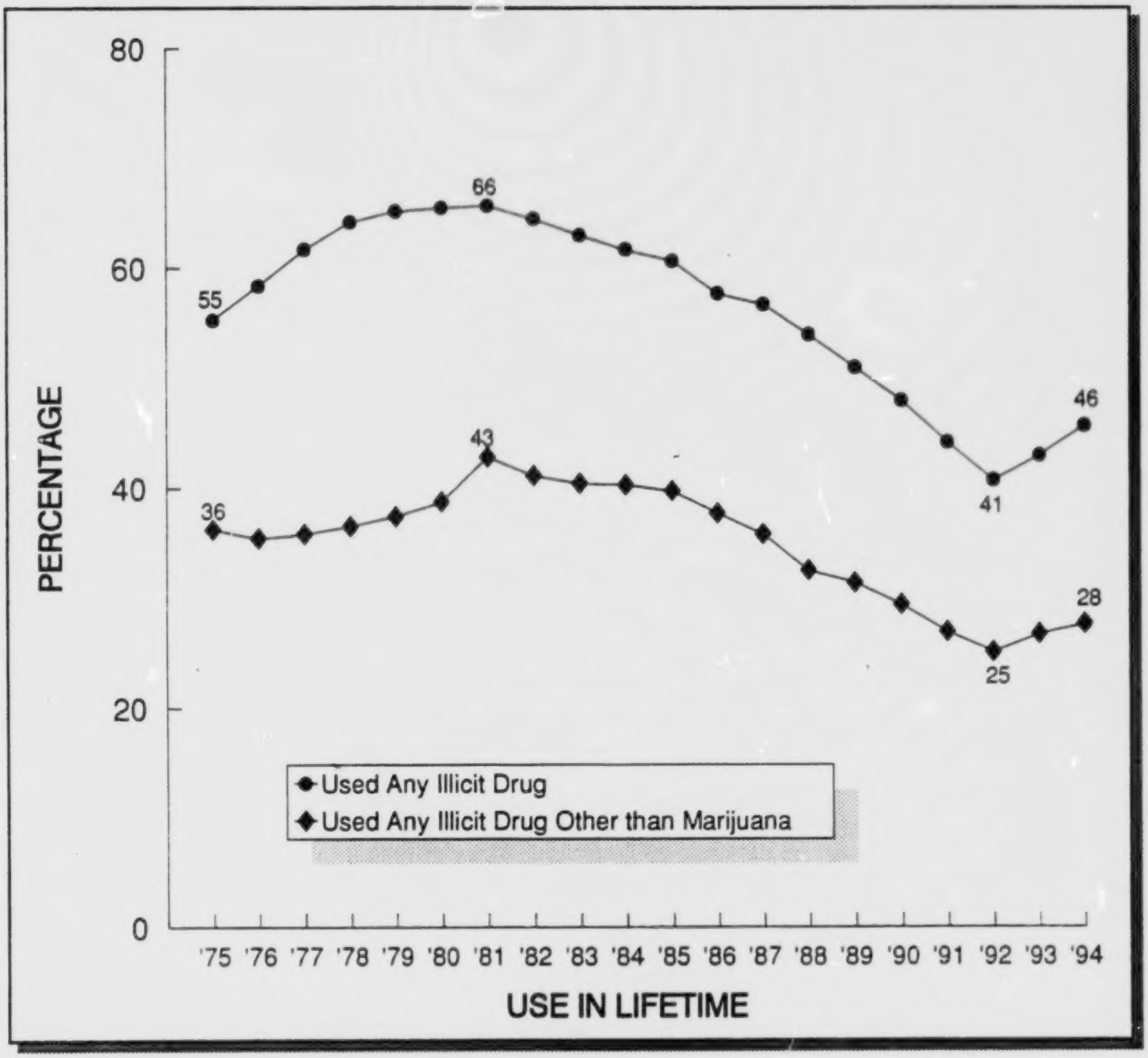
	Percent who used daily in last thirty days																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Approx. N =	*9400*	*16400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	
Marijuana/Hashish	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	4.0	3.3	2.7	2.9	2.2	2.0	1.9	2.4	3.6	+1.2sss
Inhalants[c]	—	*	*	0.1	*	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	-0.1
Inhalants, Adjusted[c,d]	—	—	—	—	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.2	0.2	—	—
Amyl & Butyl Nitrites[e,f]	—	—	—	—	*	0.1	0.1	0.0	0.2	0.1	0.3	0.5	0.3	0.1	0.3	0.1	0.2	0.1	0.1	0.2	+0.1
Hallucinogens	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Hallucinogens, Adjusted[e]	—	—	—	—	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	*	0.3	0.3	0.1	0.1	0.1	—	—
LSD	*	*	*	*	*	*	0.1	*	0.1	0.1	0.1	*	0.1	*	*	0.1	0.1	0.1	0.1	0.1	0.0
PCP[e,f]	—	—	—	—	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.3	+0.1
Cocaine	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.0
Crack[h]	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0
Other Cocaine[i]	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.2	0.1	0.1	0.1	*	0.1	0.1	0.0
Heroin	0.1	*	*	*	*	*	*	*	0.1	*	*	*	*	*	0.1	*	*	*	*	*	0.0
Other Opiates[j]	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	*	*	0.1	0.0
Stimulants[h,j]	0.5	0.4	0.5	0.5	0.6	0.7	1.2	0.7	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0
Crystal Meth. (Ice)[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.1	*	0.0
Sedatives[j,l]	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	0.0
Barbiturates[j]	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	*	0.1	0.1	0.1	*	0.1	*	0.0
Methaqualone[j,l]	*	*	*	*	*	0.1	0.1	0.1	*	*	*	*	*	0.1	*	*	*	0.1	0.0	0.1	+0.1
Tranquilizers[j]	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	*	0.1	*	0.1	0.1	0.1	*	*	0.1	0.0
Alcohol																					
Daily[m]	5.7	5.6	6.1	5.7	6.9	6.0	6.0	5.7	5.5	4.8	5.0	4.8	4.8	4.2	4.2	3.7	3.6	3.4	2.5 3.4	— 2.9	— -0.5
Been drunk daily[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.8	0.9	1.2	+0.3
5+ drinks in a row in last 2 weeks	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2	29.8	27.9	27.5	28.2	+0.7
Cigarettes																					
Daily	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1	18.5	17.2	19.0	19.4	+0.4
Half-pack or more per day	17.9	19.2	19.4	18.8	16.5	14.3	13.5	14.2	13.8	12.3	12.5	11.4	11.4	10.6	11.2	11.3	10.7	10.0	10.9	11.2	+0.3
Smokeless Tobacco[e]	—	—	—	—	—	—	—	—	—	—	—	4.7	5.1	4.3	3.3	—	—	4.3	3.3	3.9	+0.6s
Steroids[k]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.2	0.1	0.1	0.1	0.4	+0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. '*' indicates less than .05 percent. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent classes is due to rounding error.
See Table 11 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

FIGURE 6

Trends in Lifetime Prevalence of an Illicit Drug Use Index for Twelfth Graders

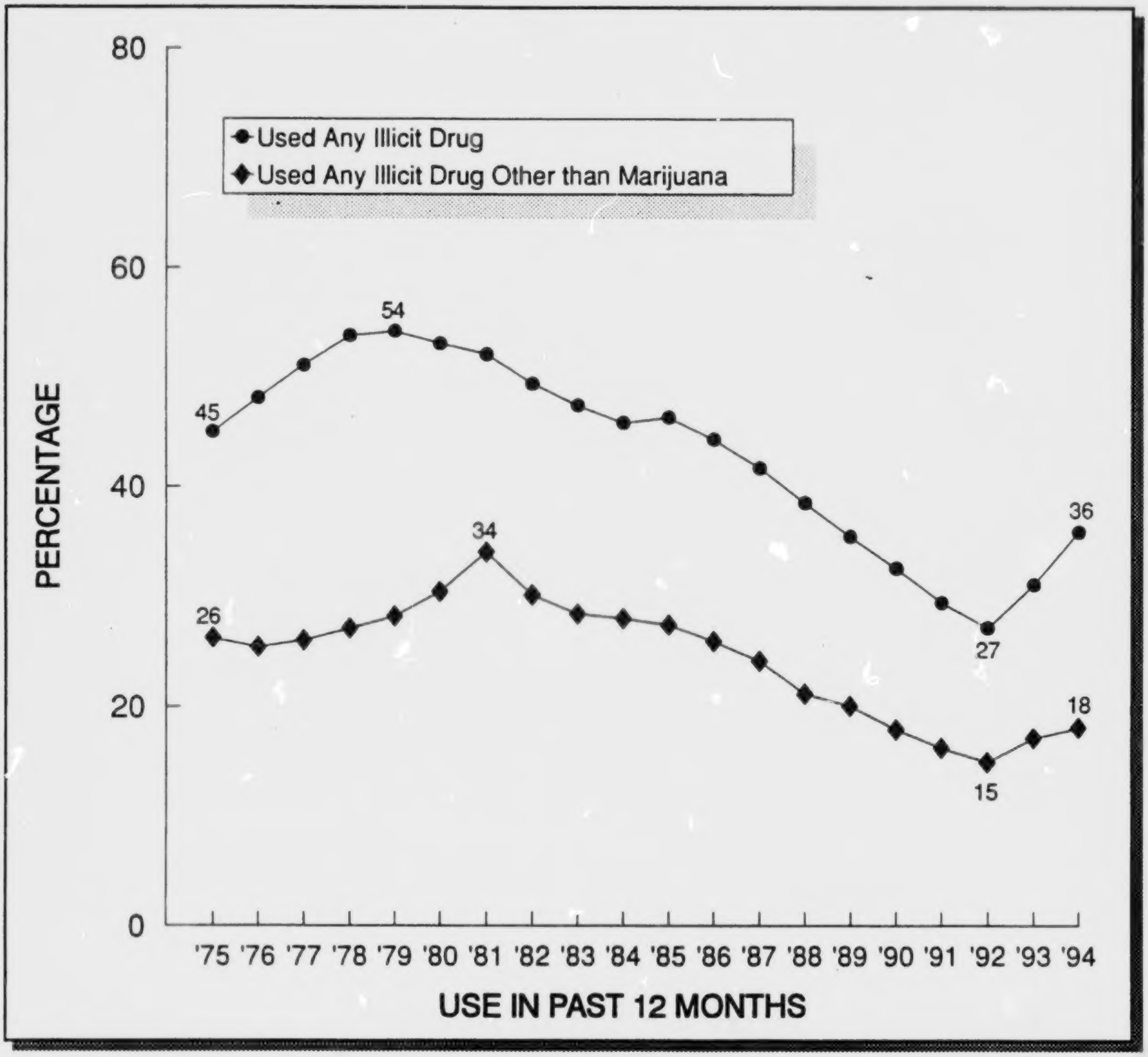


NOTES: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use which is not under a doctor's orders of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers.

Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 7

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders

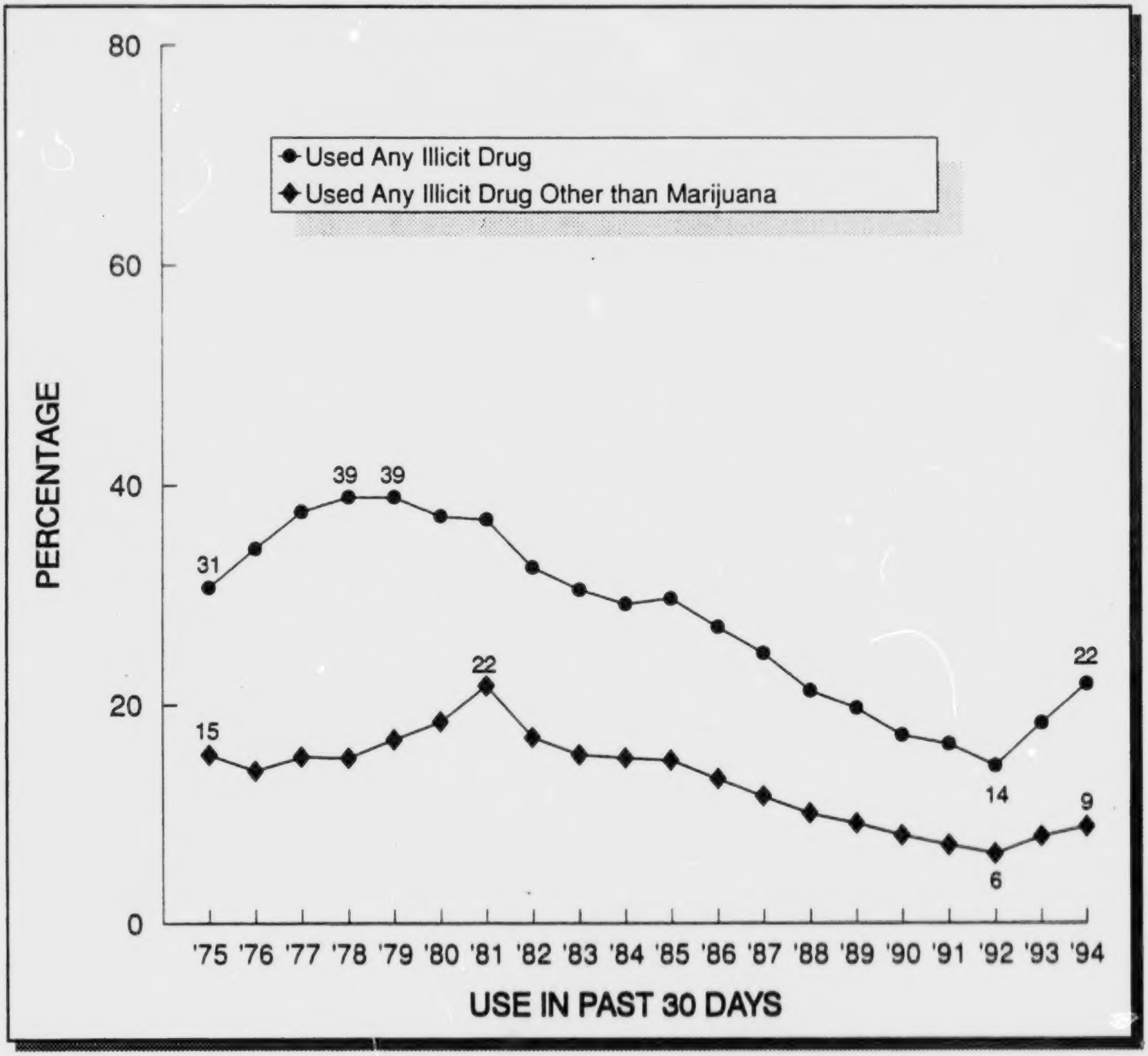


NOTES: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack or other cocaine, or heroin, or any use which is not under a doctor's orders of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers.

Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 8

Trends in Thirty-Day Prevalence of an Illicit Drug Use Index for Twelfth Graders



NOTES: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use which is not under a doctor's orders of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers.

Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

one in every nine high school seniors (11%) indicated that he or she used the drug on a daily or nearly daily basis (defined as use on 20 or more occasions in the last 30 days). In 1979 this rapid and troublesome increase halted, followed by a rapid reversal. By 1992 the daily usage rate had dropped to 1.9%, well below the peak rate of 11% or even the 6% level first observed in 1975. We attribute much of this dramatic decline to a very substantial increase in concerns about possible adverse effects from regular use, and to a growing perception that peers would disapprove of marijuana use, particularly regular use. In 1993, for the first time in fifteen years, daily marijuana use increased significantly, from 1.9% in 1992 to 2.4%. Another significant increase to 3.6% occurred in 1994, reaching the highest rate since 1986.

- Until 1978, the proportion of seniors involved in ***any illicit drug use*** increased steadily, primarily because of the increase in marijuana use (see Figure 6). About 54% of the classes of 1978 and 1979 reported taking at least one illicit drug during the prior year, up from our first observation of 45% in the class. Between 1979 and 1984, however, the proportion reporting using any illicit drug during the prior year dropped by 1% or 2% annually until 1985, when there was a brief pause in the decline. In 1986 the decline resumed, with annual prevalence dropping significantly to 27% by 1992. As with marijuana, the annual prevalence rate has increased since then to 36%.

- As Figure 6 and Table 11 illustrate, between 1976 and 1982 there was a very gradual, steady increase in the proportion of twelfth graders using ***some illicit drug other than marijuana***[21]. The annual prevalence of such behaviors (Figure 7), which rose by nine percentage points between 1976 and 1981 (from 25% to 34%), began a steady decline to 15% in 1992. Since 1992 annual prevalence has risen to 18%. The 30-day prevalence figure actually began to drop a year earlier–in 1982–and exhibited the largest proportional drop, from 22% in 1981 to 6% in 1992 (see Figure 8 and Table 13). In 1993, these measures showed a significant increase, indicating that the turnaround in 1993 was not confined to marijuana use. Annual prevalence rose from 15% to 17%. In 1994 only slight increases (non-significant) were seen in this measure. When compared to the large increases seen in the any illicit use index it is apparent that the marijuana increase is the main cause of the increase in use of *any* illicit drug use in 1994.

  Most of the earlier rise in the use of some ***illicit drug other than marijuana*** appeared to be due to the increasing popularity of cocaine with this age group between 1976 and 1979, and then to the increasing use of stimulants between 1979 and 1981. As stated earlier, we believe that the upward shift in stimulant use was exaggerated because some respondents included instances of using over-the-counter stimulants in their reports of amphetamine use. Figures 6 through 8 show trends which, beginning in 1982, were revised to exclude the inappropriate reporting of these non-prescription stimulants.

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[21] Included under the definition of "any illicit drug other than marijuana" is any use of hallucinogens, cocaine, and heroin, as well as any use which is not under a doctors orders of other opiates, stimulants, barbiturates, tranquilizers, and quaaludes (excluded since 1990). Not included are the following: alcohol, tobacco, inhalants, and steroids.

- Although the overall proportion using ***illicit drugs other than marijuana*** has changed gradually and steadily over the years, greater fluctuations have occurred for specific drugs within the class. This is important because it shows that, while the proportion willing to try any illicit drug may put outer limits on the amplitude of fluctuations for any one of them, the various subclasses of drugs must have important determinants specific to them–variables such as perceived risks, peer normative attitudes, assumed benefits, and availability. Such variables will be discussed in Chapters 8 and 9. (See Tables 11 through 13 and Figures 9a through 9i for trends in lifetime, annual, and monthly prevalence for each class of drugs.)

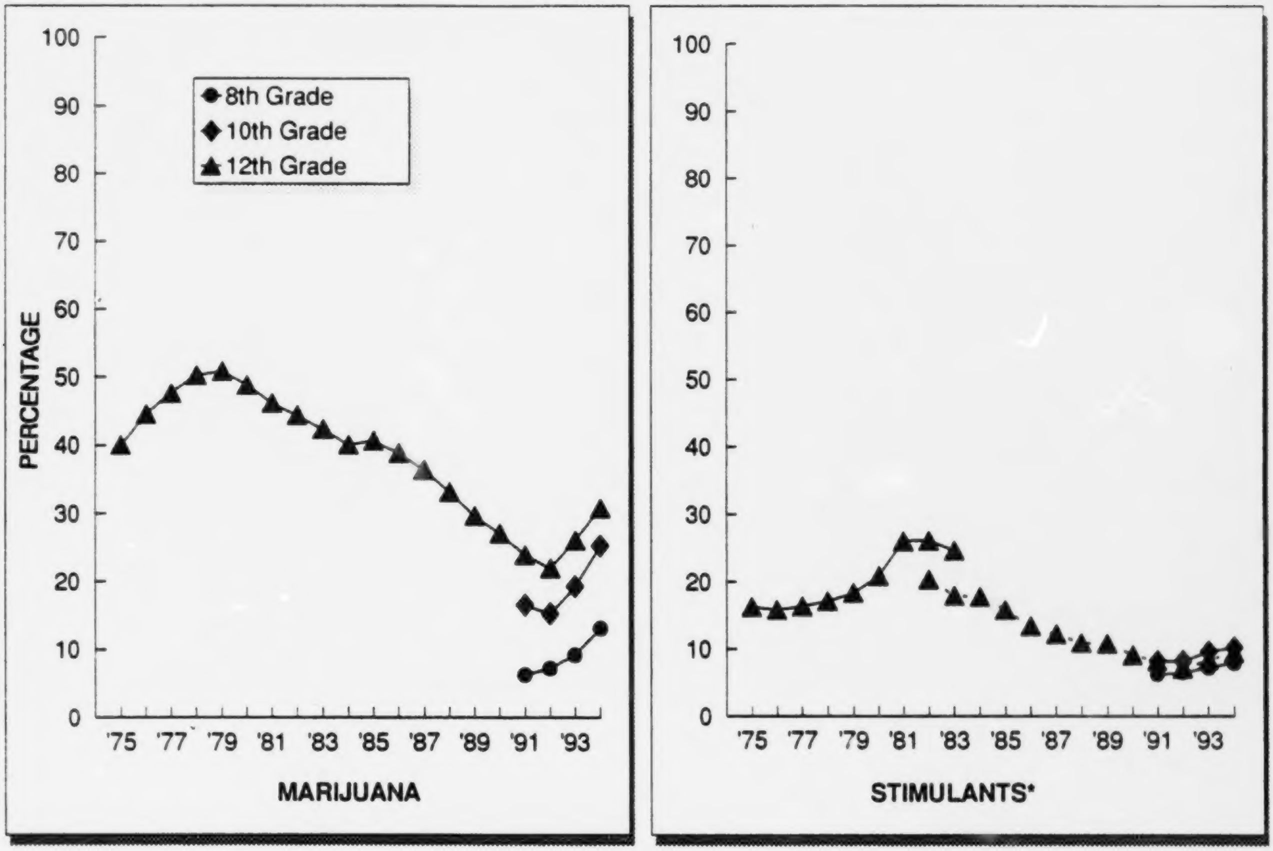
- From 1976 to 1979 ***cocaine*** (Figure 9e) exhibited a substantial increase in popularity, with annual prevalence rising from 6% in the class of 1976 to 12% in the class of 1979–a two-fold increase in just three years. For the nation as a whole, there was little or no change in any of the cocaine prevalence statistics for seniors between 1979 and 1984. (Subgroup differences in trends are discussed below.) In 1985, we reported statistically significant increases in annual and monthly use, then a leveling again in 1986. Since 1986 both indicators of use have decreased substantially: annual use decreased from 12.7% in 1986 to 3.1% in 1992; monthly use decreased from 6.2% to 1.3% over the same period–nearly an 80% drop. (Reasons for this decrease are discussed in the chapter on attitudes and beliefs.) The declines ended in 1993; annual prevalence in 1994 is 3.6% and 30-day prevalence is 1.5% (up 0.2%).

- Use of ***crack cocaine*** was first measured in 1986 by a single question contained in one questionnaire form, and asked only of those who reported any use of cocaine in the past 12 months. It simply asked if crack was one of the forms of cocaine they had used. It is thus an estimate of the annual prevalence of crack use.

  Other indicators that were gathered routinely in the study show some indirect evidence of the rapid spread of crack prior to 1986. For example, we found that the proportion of all seniors reporting that they smoked cocaine (as well as having used in the past year) more than doubled between 1983 and 1986 from 2.4% to 5.7%. In the same period the proportion of all seniors who said both that they had used cocaine

FIGURE 9a

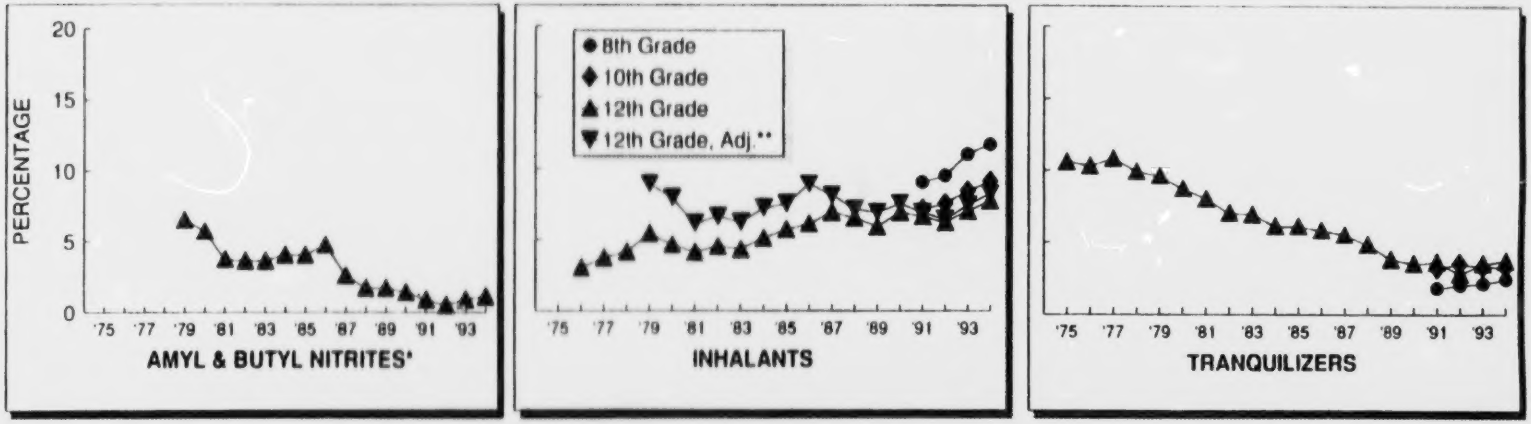
Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 9b

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders

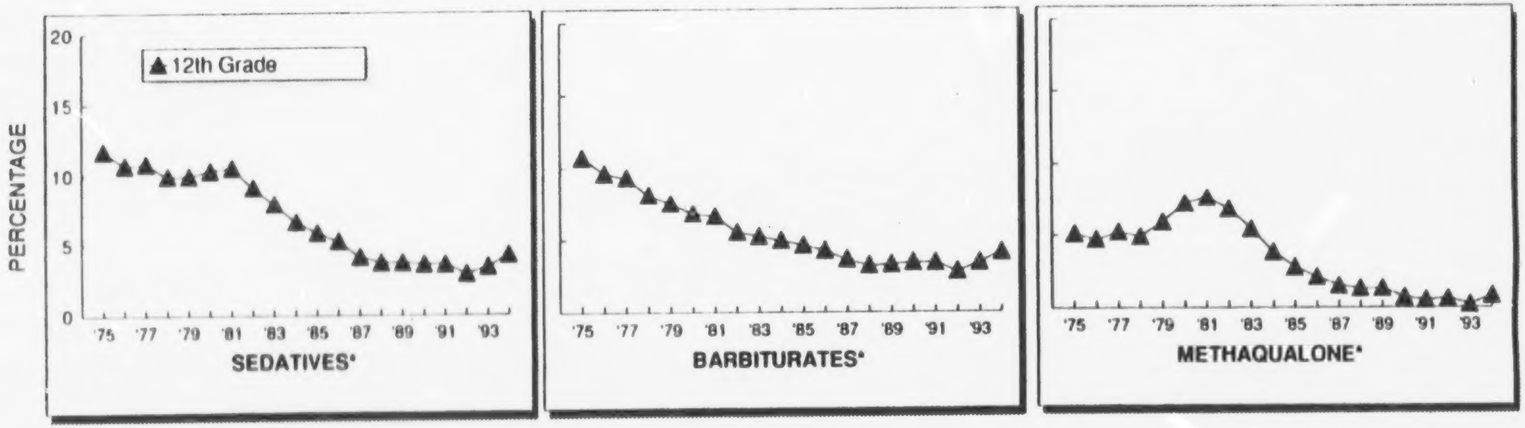


*8th and 10th graders are not asked about nitrite use.

**Adjusted for underreporting of amyl and butyl nitrites.

FIGURE 9c

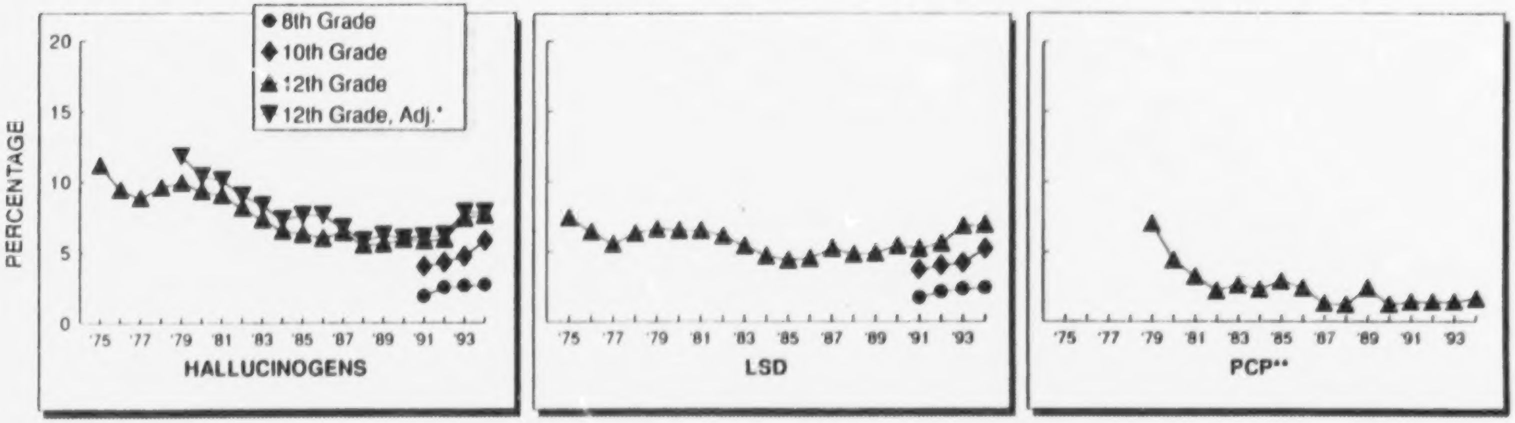
Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*8th and 10th graders are not asked about sedatives, barbiturates, and methaqualone use.

FIGURE 9d

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



HALLUCINOGENS

LSD

PCP**

*Adjusted for underreporting of PCP.

**8th and 10th graders are not asked about PCP use.

FIGURE 9e

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders

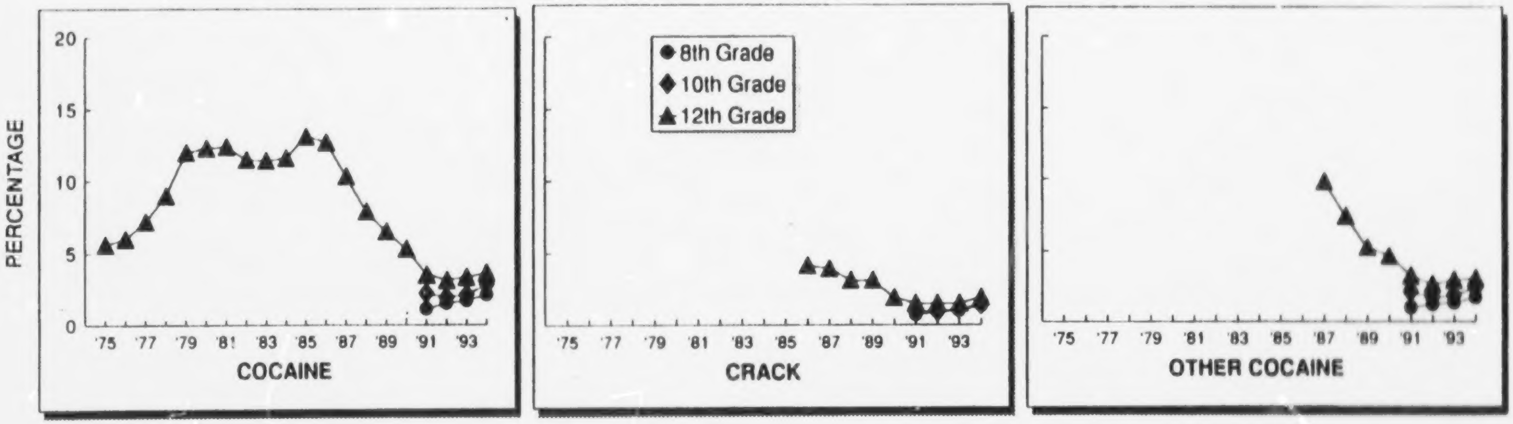


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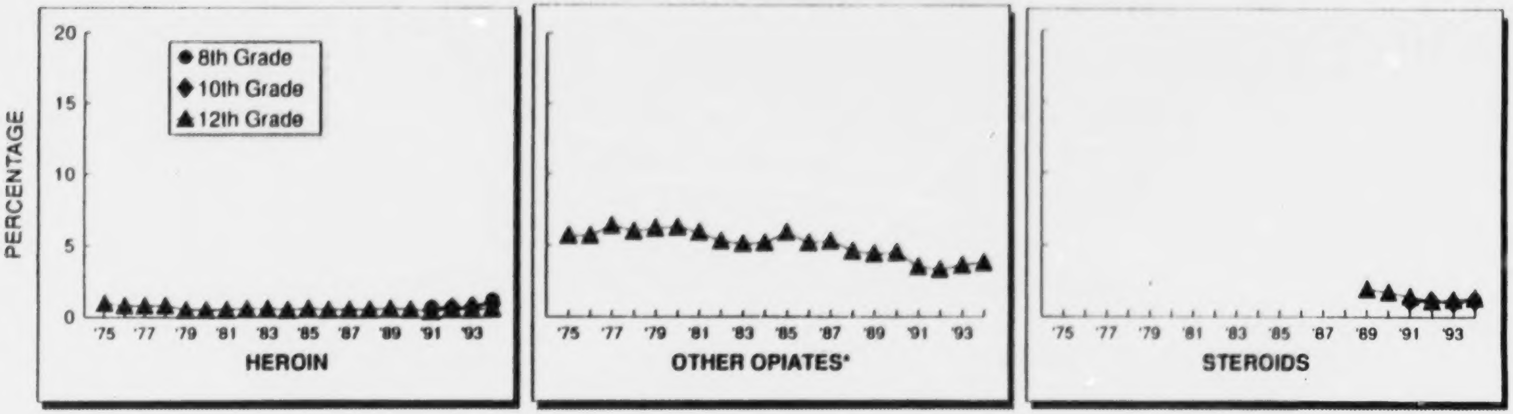
FIGURE 9f

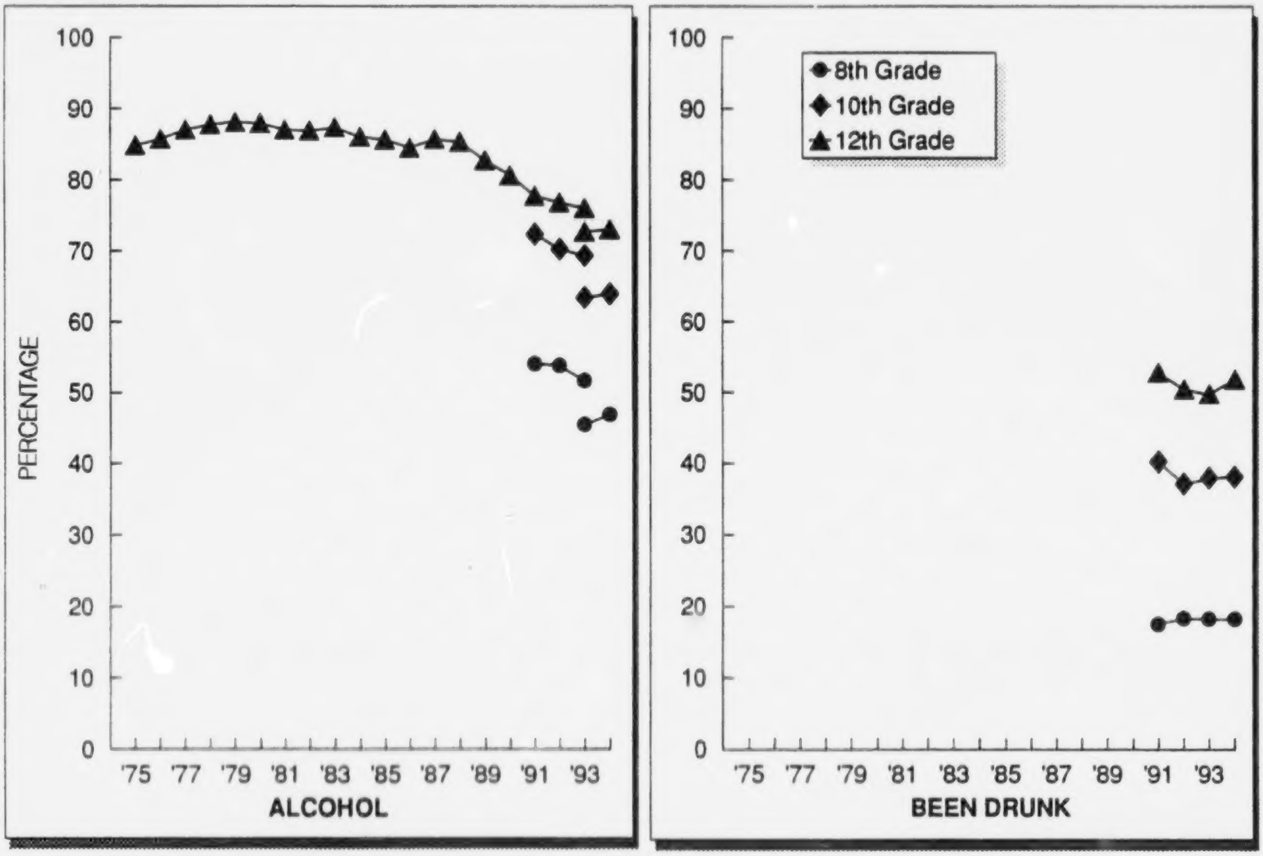
Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*8th and 10th graders are not asked about other opiate use.

FIGURE 9g

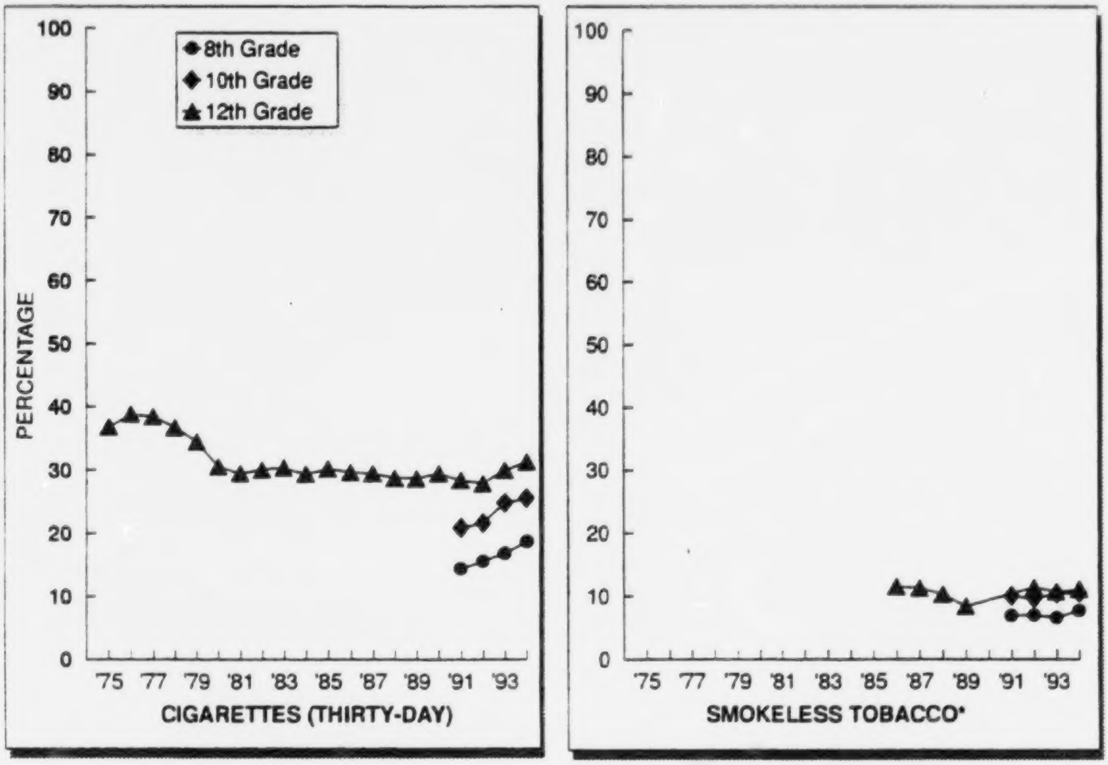
Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



NOTE: Beginning in 1993 a revised set of questions on alcohol use was introduced, in which respondents were told that an occasion of use meant "more than just a few sips."

FIGURE 9h

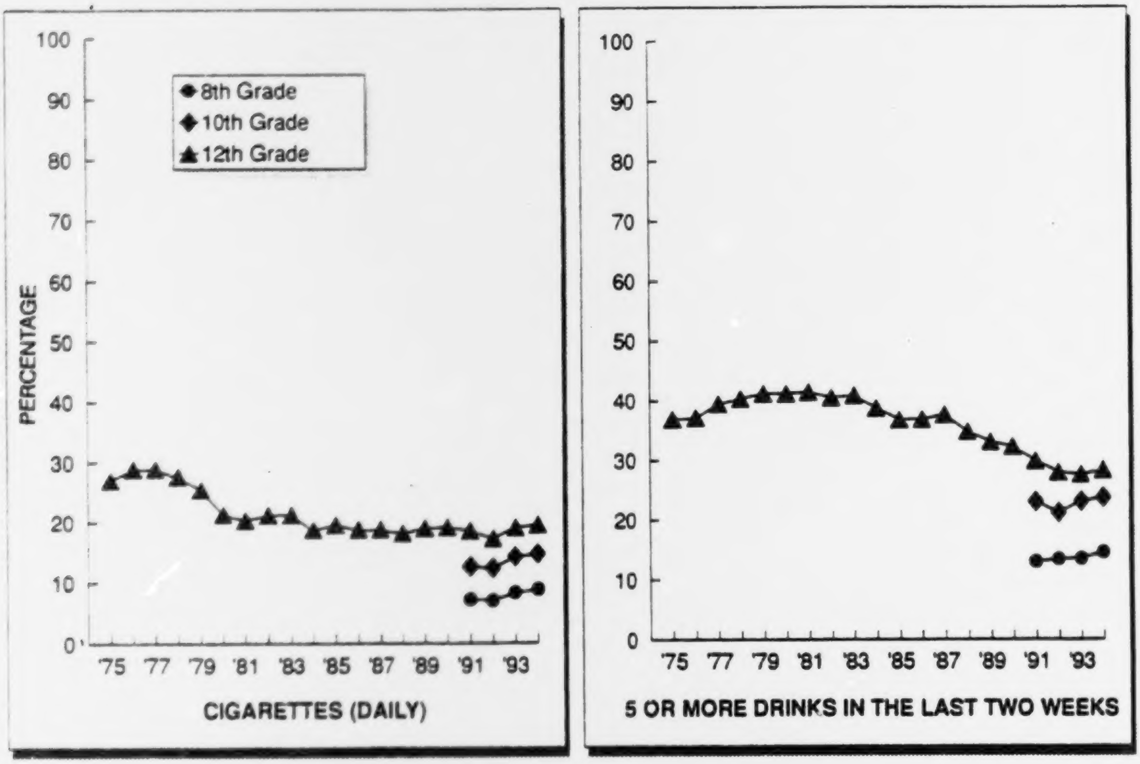
Trends in Thirty-Day Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*12th graders: Smokeless tobacco data not available in 1990 or 1991.

FIGURE 9i

Trends in Thirty-Day Prevalence of Daily Use of Cigarettes, and Two-Week Prevalence of Heavy Drinking for Eighth, Tenth, and Twelfth Graders



during the prior year and that they had at some time been unable to stop using when they tried to stop, doubled (from 0.4% to 0.8%). In addition, between 1984 and 1986 the proportion of seniors reporting active daily use of cocaine doubled (from 0.2% to 0.4%). We think it likely that the advent of crack use during this period contributed to these statistics.

- In 1987 we introduced questions about crack use into two questionnaire forms using our standard set of three questions which ask separately about frequency of use in lifetime, past 12 months, and past 30 days. These were added subsequently to all forms beginning in 1990.

  Between 1986 and 1991, annual ***crack*** prevalence declined from 4.1% to 1.5%, or about 60% over this time period (see Figure 9e). Lifetime prevalence rates were 5.4% in 1987 (the first year this measure was available) and were down by half to a low of 2.6% in 1992. The figures for 30-day prevalence have dropped from 1.3% in 1987 to 0.7% in 1990. Then for several years, rates remained relatively stable before starting to inch up again in 1994.

  It is important to note that ***crack*** use may be disproportionately located in the out-of-school population relative to most other drugs. In general, it would seem likely that the trends there would parallel those seen among high school seniors, who represent the majority of the population the same age, but one could imagine exceptions.

- Like cocaine use, ***inhalant*** use rose steadily, but more slowly, in the late 1970s (see Figure 9b). Annual prevalence (unadjusted) rose from 3.0% in 1976 and peaked at 5.4% in 1979. Starting in 1979 when separate questions were introduced to measure the rising use of nitrite inhalants, an adjustment was introduced into the overall inhalant use measure to correct for the known underreporting of nitrite inhalants. Between 1979 and 1983, there was some overall decline in this adjusted version–in part due to a substantial drop in the use of ***amyl and butyl nitrites,*** for which annual prevalence declined from 6.5% in 1979 to 3.6% in 1983. Both the adjusted and unadjusted measures increased modestly between 1983 and 1986, with annual use for inhalants (adjusted) increasing from 6.2% in 1983 to 8.9% in 1986, and the use of nitrites increasing less, from 3.6% to 4.7%.

  Since 1986, there has been a steep decline in annual ***nitrite*** use (from 4.7% to 1.1% in 1994) but only a modest decline in overall inhalant use (adjusted), with annual prevalence falling from 8.9% in 1986 to 6.4% in 1992, before then rising again to 8.2% in 1994. The gradual convergence of the unadjusted and adjusted inhalant prevalence rates, seen in Figure 9b, suggests that the number of seniors who use nitrites, but do not report themselves as inhalant users on the general inhalant-use question, has diminished considerably, as would be expected in light of the overall decline in nitrite use.

This unusual pattern of change, where inhalant use unadjusted for nitrites rose sharply over most of the life of the study, while the version adjusted for nitrites stayed fairly level over most of the life of the study (Figure 9b) is worth further consideration. Essentially, ***inhalants other than the nitrites*** have been rising in use, but since 1979 this rise in use was largely offset in the adjusted inhalants measure by the sharp decline in the use of the nitrites. Over time this class of drug-abusing behavior has become more common. In the class of 1976, when the inhalant questions were first introduced, 10.3% indicated any lifetime use, vs. 17.7% in 1994—a substantial increase. Annual prevalence more than doubled over the same interval, from 3.0% to 7.7%.

- ***Stimulant*** (amphetamine) use, remained relatively unchanged between 1975 and 1978, increased in 1979, 1980, and 1981 (Figure 9a). Between 1976 and 1981, reported annual prevalence rose by 10 percentage points (from 16% to 26%); daily use tripled, from 0.4% to 1.2%. As stated earlier, we think these increases were exaggerated–perhaps sharply–by respondents in the 1980 and 1981 surveys in particular including nonamphetamine, over-the-counter diet pills, as well as "look-alike" and "sound-alike" pills in their answers. In 1982, we added new versions of the questions on amphetamine use, which were more explicit in instructing respondents not to include such nonprescription pills. (These were added to only three of the five forms of the questionnaire being used; the amphetamine questions were left unchanged in the other two forms until 1984.) Between 1981 and 1982 prevalence rates dropped slightly as a result of this methodological change. In Tables 11 through 15, data for 1975 through 1981 are based on the unchanged questions, providing comparable data across time for longer-term trend estimates and data for 1982 through 1994 are based on the revised questions, providing our best assessments of current prevalence and recent trends in true amphetamine use.[22]

In 1982 and 1983, the two years for which both adjusted and unadjusted statistics are available, the unadjusted showed a modest amount of overreporting (see Figure 9a). Both statistics suggest that a downturn in the current use of stimulants began in 1982 and continued for a decade. For example, between 1982 and 1992 the annual prevalence for amphetamines (adjusted) fell by six-tenths from

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[22] We think the unadjusted estimates for the earliest years of the survey were probably little affected by the improper inclusion of nonprescription stimulants, since sales of the latter did not burgeon until after the 1979 data collection.

20% to 7%. Current use also fell by more than half. As with a number of other drugs, the trend lines veered upwards in 1993. Annual prevalence rose significantly from 7.1% in 1992 to 8.4% in 1993, and in 1994 9.4% of the seniors reported some use of amphetamines in the past year.

- In 1990 questions were added about twelfth graders' use of ***ice***, a crystallized form of methamphetamine which can be smoked much like crack. Despite the widespread concern at the time that an epidemic of ice use would develop, it has not made much of an inroad into this population, perhaps because the dangerous reputation of crack rubbed off on it. Lifetime prevalence was 3.3% in 1991, it dropped to 2.9% in 1992 and rose in 1994 to 3.4%. The annual and 30-day prevalence measures have been virtually flat since the first observations were taken in 1990. Annual prevalence now stands at 1.8%.

- The sustained, gradual decline in ***sedative*** use (Figure 9c) between 1975 and 1979 halted in 1980 and 1981. Annual prevalence, which dropped steadily from 11.7% in 1975 to 9.9% in 1979, increased slightly to 10.5% in 1981, perhaps reflecting the inclusion of some "look-alike" pills in the reporting. The longer-term decline resumed again in 1982, and over the next decade annual prevalence fell to 2.9%. Then a statistically significant increase emerged in the annual and 30-day measures both in 1993 and 1994.

  The overall trends for sedatives mask differential trends occurring for the two components of the measure. ***Barbiturate*** use (Figure 9c) declined steadily between 1975 and 1987 before leveling. By 1992 annual prevalence (2.8%) was less than one-third of the 1975 level (10.7%). In 1993 and 1994, annual and 30-day ***barbiturate*** use rose significantly to 4.1% annually. ***Methaqualone*** use (Figure 9c), on the other hand, rose sharply from 1978 until 1981. In fact, it was the only drug other than stimulants that was still rising in 1981. But in 1982, the use of methaqualone also began to decline, accounting for the overall sedative category resuming its decline that year. Annual use increased significantly (to 0.8%) in 1994 but still stands at a small fraction of its peak level observed in 1981 (7.6%). Because of the very low prevalence rates, methaqualone questions were dropped from five of the six questionnaire forms in 1990; since then, sedative prevalence estimates, a combination of barbiturate and methaqualone prevalence, are based on only one form.

- Usage statistics for ***tranquilizers*** (Figure 9b) peaked in 1977, probably following a considerable period of increase. Lifetime prevalence dropped by two-thirds (from 18% in 1977 to 6% in 1992), annual prevalence by nearly three-fourths (from 11% to 2.8%), and

30-day prevalence by more than three-fourths (from 4.6% to 1.0%). Following significant declines on all three prevalence measures in 1992, all showed an increase in 1993 and 1994, but only the 1993 increase in annual prevalence was statistically significant.

- Between 1975 and 1979 the prevalence of ***heroin*** use dropped rather steadily (Figure 9f). Lifetime prevalence dropped by half, from 2.2% in 1975 to 1.1% in 1979 and annual prevalence also dropped by half, from 1.0% in 1975 to 0.5%. This decline halted in 1979 and the statistics have remained almost constant for a decade and a half. In 1994, all prevalence rates remain similar to those in 1979, with very little change in the intervening years.

- For the first twelve years of the study, the use of ***opiates other than heroin*** remained fairly stable, with annual prevalence fluctuating between 5.1% and 6.4% (see Figure 9f). After 1987 there was a modest, gradual decline in annual prevalence from 5.3% to 3.3% in 1992. In 1993 and 1994 there were slight, not statistically significant, increases in use.

- ***Hallucinogen*** use (unadjusted for underreporting of PCP) declined some in the mid-1970s (Figure 9d) from annual prevalence of 11.2% in 1975 to 9.6% in 1978. This may have been the tail end of a longer period of decline precipitated by rising concerns about the adverse effects of hallucinogens–particularly LSD–and particularly about their possible damage to the brain and to genes. The use of hallucinogens other than PCP then leveled for several years before beginning another sustained decline. Between 1979, when the first figures adjusted for the underreporting of PCP were available, and 1984 there was a steady decline, with the annual prevalence of ***hallucinogens, adjusted*** dropping from 11.8% to 7.3%. The rate remained fairly level through 1986, dropped a little more through 1988, then remained level again through 1992. In 1993 this pattern of irregular declines ended, as annual prevalence rose significantly from 6.2% to 7.8% where it remained in 1994.

- ***LSD***, one of the major drugs comprising the hallucinogen class, showed a modest decline from 1975 to 1977, followed by considerable stability through 1981 (Figure 9d). Between 1981 and 1985 there was a second period of gradual decline, with annual prevalence falling from 6.5% to 4.4%. However, after 1985 annual prevalence began to rise gradually, from 4.4% to 5.6% in 1992. The rate of increase accelerated in 1993 as annual prevalence jumped from 5.6% to 6.8%, and the rate was 6.9% in 1994.

- Prevalence statistics for the specific hallucinogen ***PCP*** have shown a very substantial decline since 1979 when the use of this drug was first measured (see Figure 9d). Annual prevalence dropped from 7.0% in the class of 1979 to 2.2% in the class of 1982. After leveling for a few years, it dropped further to reach 1.3% in 1987, which is about where it has remained in the years since. The speed with which this drug fell from popularity strongly suggests that it achieved a reputation as a dangerous drug very quickly.

- As can be seen from these varied patterns of use, the overall proportion of seniors using ***any illicit drugs other than marijuana*** in their lifetime has changed over the years, but the mix of drugs they are using has changed even more. A number of drug classes have shown dramatic declines, some have shown substantial increases, and some have remained fairly stable. Further, the periods in which they either increased or declined varied considerably for the different classes of drugs.

- Turning to the licit drugs, in the last half of the 1970s there was a small upward shift in the prevalence of ***alcohol*** use among seniors (see Figure 9g). To illustrate, between 1975 and 1979 the annual prevalence rate rose steadily from 85% to 88%, the monthly prevalence rose from 68% to 72%, and the daily prevalence rose from 5.7% to 6.9%. As with marijuana, 1979 was the peak year for annual use. Between 1979 and 1985 annual prevalence fell from 88% to 86%, monthly prevalence from 72% to 66%, and daily prevalence from 6.9% to 5.0%. All three rates remained fairly level from about 1985 to 1987; after which they showed some further decline. Thirty-day prevalence, for example, fell from 66% in 1987 to 51% in 1993, and is down by nearly one-third from its peak level in 1978 (72%). The prevalence of daily use fell from 4.8% to 3.4% between 1987 and 1992, followed by a sharper drop to 2.5% in 1993, down by more than one-half from its peak level in 1979 (6.9%). No further declines were observed in 1994, however, based on a slightly revised set of alcohol usage questions.[23] (Based on a slightly revised set of alcohol usage questions, no further declines were observed in 1994.) If anything, there was evidence of some increase in use, though none of the changes reached statistical significance.

- A similar pattern was observed in the frequency of ***occasional heavy drinking*** (Figure 9g). When asked whether they had taken five or more drinks in a row during the prior two weeks, 37% of the seniors in 1975 said they had. This proportion rose gradually to 41% by 1979, where it remained through 1983. In both 1984 and 1985, we observed drops of 2 percentage points in this troublesome statistic, bringing it to 37%, exactly where it was in 1975. There was no further change in 1986 or 1987. Since 1987 it has dropped by another 10 percentage points, from 38% to 28% in 1993—a one-third drop from its peak level of 41%. In 1994, there was an increase of 0.7 percentage points, which is not statistically significant.

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[23] A slight revision was introduced in the question wording in three of the six forms in 1993 and in all six forms in 1994. It added the qualifier of "more than just a few sips" to the definition of a drink of an alcoholic beverage. The 1993 data show the extent of correction that resulted; see Tables 11 to 14.

Beginning in 1991, respondents were asked to report how often they had ***been drunk*** in their lifetime, the past 12 months, and the past 30 days. These measures showed declines between 1991 and 1993 followed by an increase in 1994, as would be expected given the data above (Tables 11-14).

- There is no evidence that the 14-year decline in marijuana use observed led to a concomitant increase in alcohol use, as many observers suggested would happen. In fact, through 1992 there was some parallel decline in annual, monthly, and daily alcohol use as well as in occasional heavy drinking.

- ***Cigarette use*** among seniors peaked in 1976 and 1977, as measured by lifetime, 30-day, and daily prevalence. (Annual prevalence is not asked.) Over the next four years 30-day prevalence dropped substantially, from 38% in the class of 1977 to 29% in the class of 1981. (See Tables 13 and 14 and Figure 9h.) More importantly, ***daily cigarette use*** dropped over that same interval from 29% to 20%, and daily use of half-pack-a-day or more from 19% to 14%. In 1982 and 1983 the decline had clearly halted. The earlier decline resumed briefly in 1984; daily use fell from 21% to 19%, and daily use of half-pack-a-day dropped from 14% to 12%. Between 1984 and 1992 there was very little change: 30-day prevalence fell from 29% to 28%, daily use from 19% to 17%, and half-pack-a-day smoking from 12% to 10%. Despite the general decline in use for most other drugs, despite the restrictive legislation debated and enacted at state and local levels over the years, and despite prevention efforts being made in many school systems, there was a noteworthy lack of any appreciable decline in smoking rates. In fact, in 1993, both the 30-day rate and the current daily smoking rate rose significantly (by 2.1 percentage points and 1.8 percentage points, respectively), and then rose again in 1994 (though the 1994 change did not reach significance).

- Questions about the use of ***smokeless tobacco***, which include chewing tobacco and snuff, were first introduced in 1986. They were omitted in 1990 and 1991, then reintroduced in 1992. Results show a high rate of use for the sample overall, particularly for males, who account for nearly all of the use. In 1994 about one-third of all seniors had tried smokeless tobacco and 3.9% were current daily users. The trends for the period 1986 to 1989 showed a decline in use, with 30-day prevalence falling steadily from 11.5% to 8.4%. When the questions were reintroduced in 1992, the rate (11.4%) almost matched the 1986 level. It was 11.1% in 1994. Because these questions are in a single questionnaire form, estimates are based on smaller samples than for most other drugs; it is possible to conclude that the usage level since 1986 has really been fairly flat, with random fluctuations in samples accounting for the apparent changes.

- Trend data on ***steroid*** use are available since 1989. Annual prevalence declined gradually, but steadily, from 1.9% in 1989 to 1.1% in 1992, before leveling in 1993. The rate was 1.3% in 1994.

TRENDS IN PREVALENCE 1991-1994: EIGHTH AND TENTH GRADERS

Trend data for all three grades (eighth, tenth, and twelfth) are included in Table 15 to facilitate cross-grade comparisons.

- Over the past three years, the eighth, tenth, and twelfth grade trends have moved in parallel, and all have shown increases in their use of a number of drugs.

- ***Marijuana use*** continued to rise among eighth graders, with annual prevalence doubling between 1991 and 1994, from 6.2% to 13.0%, (and reflecting a significant increase from the 9.2% reported in 1993). Use rose significantly among tenth and twelfth graders, as well, from 15.2% to 25.2% for the former and from 21.9% to 30.7% for the latter. There also were significant increases in lifetime, 30-day, and daily marijuana use at all grade levels (see Table 15).

- Annual ***hallucinogen*** use already had begun rising among eighth graders by 1992. Use among tenth and twelfth graders began to increase in 1993, with the largest increase in twelfth grade. A significant increase occurred in 1994 for tenth graders lifetime and annual use. The two components of the hallucinogens class, ***LSD*** and ***hallucinogens other than LSD***, have generally followed this pattern, except that other psychedelics increased significantly at *all* prevalences for *all* grades in 1994 (Table 15). Note that LSD currently accounts for most of the hallucinogen use at all grade levels.

- The increase in ***LSD*** use is of particular interest because it was one of the first drugs to decline in the long-term epidemic, almost surely due to growing concerns in the early to mid-1970s about its dangers. This more recent increase may reflect the effects of "generational forgetting," that is, replacement cohorts do not have as much concern about its

TABLE 15
Trends in Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Grade Students

(Entries are percentages)

	Lifetime					Annual					30-Day					Daily				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change
Marijuana/Hashish																				
8th Grade	10.2	11.2	12.6	16.7	+4.1sss	6.2	7.2	9.2	13.0	+3.8sss	3.2	3.7	5.1	7.8	+2.7sss	0.2	0.2	0.4	0.7	+0.3ss
10th Grade	23.4	21.4	24.4	30.4	+6.0sss	16.5	16.2	19.2	25.2	+6.0sss	8.7	8.1	10.9	15.8	+4.9sss	0.8	0.8	1.0	2.2	+1.2sss
12th Grade	36.7	32.6	35.3	38.2	+2.9s	23.9	21.9	26.0	30.7	+4.7sss	13.8	11.9	15.5	19.0	+3.5sss	2.0	1.9	2.4	3.6	+1.2sss
Inhalants[a,b]																				
8th Grade	17.6	17.4	19.4	19.9	+0.5	9.0	9.5	11.0	11.7	+0.7	4.4	4.7	5.4	5.6	+0.2	0.2	0.3	0.3	0.2	-0.1
10th Grade	15.7	16.6	17.5	18.0	+0.5	7.1	7.5	8.4	9.1	+0.7	2.7	2.7	3.3	3.6	+0.3	0.1	0.1	0.2	0.1	0.0
12th Grade	17.6	16.6	17.4	17.7	+0.3	6.6	6.2	7.0	7.7	+0.7	2.4	2.3	2.5	2.7	+0.2	0.2	0.1	0.1	0.1	-0.1
Hallucinogens[b]																				
8th Grade	3.2	3.8	3.9	4.3	+0.4	1.9	2.5	2.6	2.7	+0.1	0.8	1.1	1.2	1.3	+0.1	0.1	0.1	0.1	0.1	0.0
10th Grade	6.1	6.4	6.8	8.1	+1.3s	4.0	4.3	4.7	5.8	+1.1s	1.6	1.8	1.9	2.4	+0.5	*	0.1	0.1	0.1	0.0
12th Grade	9.6	9.2	10.9	11.4	+0.5	5.8	5.9	7.4	7.6	+0.2	2.2	2.1	2.7	3.1	+0.4	0.1	0.1	0.1	0.1	0.0
LSD																				
8th Grade	2.7	3.2	3.5	3.7	+0.2	1.7	2.1	2.3	2.4	+0.1	0.6	0.9	1.0	1.1	+0.1	*	*	*	*	0.0
10th Grade	5.6	5.8	6.2	7.2	+1.0	3.7	4.0	4.2	5.2	+1.0s	1.5	1.6	1.6	2.0	+0.4	*	0.1	*	*	0.0
12th Grade	8.8	8.6	10.3	10.5	+0.2	5.2	5.6	6.8	6.9	+0.1	1.9	2.0	2.4	2.6	+0.2	0.1	0.1	0.1	0.1	0.0
Hallucinogens Other than LSD																				
8th Grade	1.4	1.7	1.7	2.2	+0.5ss	0.7	1.1	1.0	1.3	+0.3s	0.3	0.4	0.5	0.7	+0.2s	*	*	*	*	0.0
10th Grade	2.2	2.5	2.8	3.8	+1.0ss	1.3	1.4	1.9	2.4	+0.5s	0.4	0.5	0.7	1.0	+0.3s	*	*	*	*	0.0
12th Grade	3.7	3.3	3.9	4.9	+1.0s	2.0	1.7	2.2	3.1	+0.9ss	0.7	0.5	0.8	1.2	+0.4s	*	*	*	*	0.0
Cocaine																				
8th Grade	2.3	2.9	2.9	3.6	+0.7s	1.1	1.5	1.7	2.1	+0.4	0.5	0.7	0.7	1.0	+0.3s	0.1	*	0.1	0.1	0.0
10th Grade	4.1	3.3	3.6	4.3	+0.7s	2.2	1.9	2.1	2.8	+0.7ss	0.7	0.7	0.9	1.2	+0.3	0.1	*	0.1	0.1	0.0
12th Grade	7.8	6.1	6.1	5.9	-0.2	3.5	3.1	3.3	3.6	+0.3	1.4	1.3	1.3	1.5	+0.2	0.1	0.1	0.1	0.1	0.0
Crack																				
8th Grade	1.3	1.6	1.7	2.4	+0.7sss	0.7	0.9	1.0	1.3	+0.3s	0.3	0.5	0.4	0.7	+0.3ss	*	*	0.1	*	0.0
10th Grade	1.7	1.5	1.8	2.1	+0.3	0.9	0.9	1.1	1.4	+0.3s	0.3	0.4	0.5	0.6	+0.1	*	*	*	*	0.0
12th Grade	3.1	2.6	2.6	3.0	+0.4	1.5	1.5	1.5	1.9	+0.4	0.7	0.6	0.7	0.8	+0.1	0.1	0.1	0.1	0.1	0.0
Other Cocaine[c]																				
8th Grade	2.0	2.4	2.4	3.0	+0.6s	1.0	1.2	1.3	1.7	+0.4	0.5	0.5	0.6	0.9	+0.3s	*	*	*	*	0.0
10th Grade	3.8	3.0	3.3	3.8	+0.5	2.1	1.7	1.8	2.4	+0.6s	0.6	0.6	0.7	1.0	+0.3s	*	*	*	*	0.0
12th Grade	7.0	5.3	5.4	5.2	-0.2	3.2	2.6	2.9	3.0	+0.1	1.2	1.0	1.2	1.3	+0.1	0.1	*	0.1	0.1	0.0
Heroin																				
8th Grade	1.2	1.4	1.4	2.0	+0.6sss	0.7	0.7	0.7	1.2	+0.5sss	0.3	0.4	0.4	0.6	+0.2s	*	*	*	0.1	0.0
10th Grade	1.2	1.2	1.3	1.5	+0.2	0.5	0.6	0.7	0.9	+0.2	0.2	0.2	0.3	0.4	+0.1	*	*	*	*	0.0
12th Grade	0.9	1.2	1.1	1.2	+0.1	0.4	0.6	0.5	0.6	+0.1	0.2	0.3	0.2	0.3	+0.1	*	*	*	*	0.0
Stimulants[d]																				
8th Grade	10.5	10.8	11.8	12.3	+0.5	6.2	6.5	7.2	7.9	+0.7	2.6	3.3	3.6	3.6	0.0	0.1	0.1	0.1	0.1	0.0
10th Grade	13.2	13.1	14.9	15.1	+0.2	8.2	8.2	9.6	10.2	+0.6	3.3	3.6	4.3	4.5	+0.2	0.1	0.1	0.3	0.1	-0.2
12th Grade	15.4	13.9	15.1	15.7	+0.6	8.2	7.1	8.4	9.4	+1.0	3.2	2.8	3.7	4.0	+0.3	0.2	0.2	0.2	0.2	0.0
Tranquilizers[d]																				
8th Grade	3.8	4.1	4.4	4.6	+0.2	1.8	2.0	2.1	2.4	+0.3	0.8	0.8	0.9	1.1	+0.2	*	*	0.1	0.1	0.0
10th Grade	5.8	5.9	5.7	5.4	-0.3	3.2	3.5	3.3	3.3	0.0	1.2	1.5	1.1	1.5	+0.4s	*	*	*	*	0.0
12th Grade	7.2	6.0	6.4	6.6	+0.2	3.6	2.8	3.5	3.7	+0.2	1.4	1.0	1.2	1.4	+0.2	0.1	*	*	0.1	0.0

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 15 (continued)

Trends in Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Grade Students

(Entries are percentages)

	Lifetime					Annual					30-Day					Daily				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change
Alcohol[e]																				
Any use																				
8th Grade	70.1	69.3	67.1	—		54.0	53.7	51.6	—		25.1	26.1	26.2	—		0.5	0.6	0.8	—	
			55.7	55.8	+0.1			45.4	46.8	+1.4			24.3	25.5	+1.2			1.0	1.0	0.0
10th Grade	83.8	82.3	80.8	—		72.3	70.2	69.3	—		42.8	39.9	41.5	—		1.3	1.2	1.6	—	
			71.6	71.1	-0.5			63.4	63.9	+0.5			38.2	39.2	+1.0			1.8	1.7	-0.1
12th Grade	88.0	87.5	87.0	—		77.7	76.8	76.0	—		54.0	51.3	51.0	—		3.6	3.4	2.5	—	
			80.0	80.4	+0.4			72.7	73.0	+0.3			48.6	50.1	+1.5			3.4	2.9	-0.5
5+ drinks in last 2 weeks																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.9	13.4	13.5	14.5	+1.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.9	21.1	23.0	23.6	+0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.8	27.9	27.5	28.2	+0.7
Been drunk[f]																				
8th Grade	26.7	26.8	26.4	25.9	-0.5	17.5	18.3	18.2	18.2	0.0	7.6	7.5	7.8	8.7	+0.9	0.1	0.1	0.2	0.3	+0.1
10th Grade	50.0	47.7	47.9	47.2	-0.7	40.1	37.0	37.8	38.0	+0.2	20.5	18.1	19.8	20.3	+0.5	0.2	0.3	0.4	0.4	0.0
12th Grade	65.4	63.4	62.5	62.9	+0.4	52.7	50.3	49.6	51.7	+2.1	31.6	29.9	28.9	30.8	+1.9	0.9	0.8	0.9	1.2	+0.3
Cigarettes																				
Any use																				
8th Grade	44.0	45.2	45.3	46.1	+0.8	—	—	—	—	—	14.3	15.5	16.7	18.6	+1.9s	7.2	7.0	8.3	8.8	+0.5
10th Grade	55.1	53.5	56.3	56.9	+0.6	—	—	—	—	—	20.8	21.5	24.7	25.4	+0.7	12.6	12.3	14.2	14.6	+0.4
12th Grade	63.1	61.8	61.9	62.0	+0.1	—	—	—	—	—	28.3	27.8	29.9	31.2	+1.3	18.5	17.2	19.0	19.4	+0.4
1/2 pack+/day																				
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.1	2.9	3.5	3.6	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.5	6.0	7.0	7.6	+0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.7	10.0	10.9	11.2	+0.3
Smokeless Tobacco[g]																				
8th Grade	22.2	20.7	18.7	19.9	+1.2	—	—	—	—	—	6.9	7.0	6.6	7.7	+1.1	1.6	1.8	1.5	1.9	+0.4
10th Grade	28.2	26.6	28.1	29.2	+1.1	—	—	—	—	—	10.0	9.6	10.4	10.5	+0.1	3.3	3.0	3.3	3.0	-0.3
12th Grade	—	32.4	31.0	30.7	-0.3	—	—	—	—	—	—	11.4	10.7	11.1	+0.4	—	4.3	3.3	3.9	+0.6s
Steroids[f]																				
8th Grade	1.9	1.7	1.6	2.0	+0.4ss	1.0	1.1	0.9	1.2	+0.3ss	0.4	0.5	0.5	0.5	0.0	*	*	0.1	*	-0.1
10th Grade	1.8	1.7	1.7	1.8	+0.1	1.1	1.1	1.0	1.1	+0.1	0.6	0.6	0.5	0.6	+0.1	0.1	*	*	0.1	0.0
12th Grade	2.1	2.1	2.0	2.4	+0.4	1.4	1.1	1.2	1.3	+0.1	0.8	0.6	0.7	0.9	+0.2	0.1	0.1	0.1	0.4	+0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. '*' indicates less than .05 percent. Any apparent inconsistency between the change estimate and the prevalence estimates for the recent classes is due to rounding error.

Approx. N:
8th Grade = 17,500 in 1991; 18,600 in 1992; 18,300 in 1993; 17,300 in 1994
10th Grade = 14,800 in 1991; 14,800 in 1992; 15,300 in 1993; 15,800 in 1994
12th Grade = 15,000 in 1991; 15,800 in 1992; 16,300 in 1993; 15,400 in 1994

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 12th grade only: Data based on five questionnaire forms. N is five-sixths of N indicated.

[b] 12th grade only: Unadjusted for underreporting of certain drugs. See text for details.

[c] 12th grade only: Data based on four questionnaire forms. N is four-sixths of N indicated.

[d] 12th grade only: Only drug use which was not under a doctor's orders is included here.

[e] In 1993, the question text was changed slightly in some forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the old wording, while the data in the lower line came from forms using the revised wording. For 1993 only: Data based on one of two questionnaire forms for 8th and 10th grades and on three of six questionnaire forms for 12th grade. N is one-half of N indicated. In 1994, data were based on all forms for all grades.

[f] 12th grade only: Data based on two questionnaire forms. N is two-sixths of N indicated.

[g] Data based on one questionnaire form. N is one-half of N indicated for 8th and 10th grades, and N is one-sixth of N indicated for 12th grade.

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dangers as their predecessors because they did not have comparable opportunities for direct and vicarious learning about the consequences of using the drug.[24]

- In 1994 annual use among tenth graders increased significantly for ***cocaine, crack***, and ***other cocaine***. Annual crack use also increased significantly for eighth graders. These increases combined with the findings on attitudes and peer norms provide the basis for some concern about the future.

- ***Stimulants*** also increased in use at all three grade levels in 1994, reaching annual prevalence rates of 7.9% for eighth graders, 10.2% for tenth graders, and 9.4% for twelfth graders. Like several other drugs, the rise in stimulant use appears to have begun a year earlier among the eighth graders.

- While none of the ***inhalant*** changes reach statistical significance in 1994, all three prevalence measures rose slightly in all three grade levels. In the case of the annual prevalence statistics, this was the third year of increase for the eighth and tenth graders. It seems likely that this trend may parallel the long-term increase exhibited by the twelfth grade students in inhalant use over the past decade.

- ***Tranquilizer*** use has not shown a consistent pattern of change across grades since 1991.

- There has been little systematic change in ***heroin*** use since 1991 at any grade level, but in 1994 heroin use rose significantly among eighth graders.

- After 1991 the lifetime and annual prevalence measures for ***alcohol*** showed some decline in all three grades. However, the 30-day prevalence measures did not decline among eighth graders, and declined rather little among tenth graders. In 1994 a small increase (non-significant) was seen for all grades for the 30-day measure. Eighth graders also showed some increase in annual prevalence.

  Occasional heavy drinking has been gradually rising among eighth graders since 1991, among tenth graders since 1992, and among twelfth graders since 1993. Self-reported ***drunkenness*** showed a similar pattern.

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[24] See Johnston, L.D. (1991). Toward a theory of drug epidemics. *In* R.L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

- ***Cigarettes*** generally can be expected to move less synchronously across the three grade levels because changes are usually the result of cohort effects rather than secular trends, and this was the case in 1992. However, in 1993 all three grade levels showed a significant increase in daily smoking, an increase which continued in 1994. Because of this parallel movement, we are inclined to look for some historical correlates. One possibility is that cigarette prices dropped on average because of increased price competition among brands. Another possibility is that cigarette advertising and promotion has grown and/or become more effective at reaching youth. A third is that the portrayal of smoking has increased in the entertainment media.

- There has been little systematic change in the use of ***smokeless tobacco*** since 1991.

- ***Steroid*** use showed little change in any grade level through 1993. Eighth graders' lifetime and annual prevalence increased significantly in 1994.

TRENDS IN NONCONTINUATION RATES: TWELFTH GRADERS

Table 16 shows how the user noncontinuation rates observed for the various classes of drugs have changed over time among twelfth graders. (No such calculations have yet been made for the lower grades.) The noncontinuation rate is defined here as the percentage of those who ever used the drug but did not use in the twelve months prior to the survey.

- ***Marijuana*** showed some increase in the noncontinuation rates between 1979 (16%) and 1984 (27%). This increase gave rise to the greater drop in the annual use figure than in lifetime use, which is only influenced by changes in the initiation rate. Between 1984 and 1987 there was no further increase, followed by a rise to 35% in 1991. The noncontinuation rate then fell sharply to 20% by 1994, which helps to explain the sharp turnaround in the annual and 30-day prevalence rates.

- The noncontinuation rate for ***cocaine*** decreased from 38% in 1976 to 22% in 1979, corresponding to the period of increase in the overall prevalence of use. It then remained fairly stable through 1986, corresponding to a period of stability in the actual prevalence statistics. After 1986, use fell substantially, reflecting in part a considerable increase in the rate of noncontinuation–from 25% in 1986 to 55% in 1991. Since 1991 the noncontinuation rate has been declining, reaching 39% in 1994.

TABLE 16
Trends in Noncontinuation Rates
Twelfth Graders Who Ever Used Drug in Lifetime

	Percent who did not use in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Marijuana/Hashish	15.4	15.7	15.6	15.2	15.9	19.1	22.5	24.5	25.8	27.1	25.1	23.8	27.7	29.9	32.3	33.7	34.9	32.8	26.3	19.6
Inhalants	—	70.9	66.7	65.8	57.5	61.3	66.7	64.8	68.4	64.6	63.0	61.6	59.4	61.1	66.5	61.7	62.5	62.7	59.8	56.5
Inhalants, Adjusted	—	—	—	—	50.8	55.7	65.5	63.3	64.4	58.4	59.8	55.7	56.5	59.4	62.9	59.5	61.7	62.4	58.2	55.2
Amyl/Butyl Nitrites	—	—	—	—	41.4	48.6	63.4	63.3	57.1	50.6	49.4	45.3	44.7	46.9	48.5	33.3	43.7	66.7	35.7	35.3
Hallucinogens	31.3	37.7	36.7	32.9	29.8	30.1	32.3	35.2	38.7	39.3	38.8	38.1	37.9	38.2	40.4	37.2	39.6	35.9	32.1	33.3
Hallucinogens, Adjusted	—	—	—	—	31.2	32.5	35.7	38.0	36.7	40.6	36.9	36.1	36.8	37.0	37.4	38.1	39.0	34.0	31.0	33.3
LSD	36.3	41.8	43.9	35.1	30.5	30.1	33.7	36.5	39.3	41.3	41.3	37.5	38.1	37.7	41.0	37.9	40.9	34.9	34.0	34.3
PCP	—	—	—	—	45.3	54.2	59.0	63.3	53.6	54.0	40.8	50.0	56.7	58.6	38.5	57.1	51.7	41.7	51.7	42.9
Cocaine	37.8	38.1	33.3	30.2	22.1	21.7	24.8	28.1	29.6	28.0	24.3	24.9	32.2	34.7	36.9	43.6	55.1	49.2	45.9	39.0
Crack	—	—	—	—	—	—	—	—	—	—	—	—	27.8	35.4	34.0	45.7	51.6	42.3	42.3	36.7
Other Cocaine	—	—	—	—	—	—	—	—	—	—	—	—	30.0	38.8	38.8	46.5	54.3	50.9	46.3	42.3
Heroin	54.5	55.6	55.6	50.0	54.5	54.5	54.5	50.0	50.0	61.5	50.0	54.5	58.3	54.5	53.8	61.5	55.6	50.0	54.5	50.0
Other Opiates	36.7	40.6	37.9	39.4	38.6	35.7	41.6	44.8	45.7	46.4	42.2	42.2	42.4	46.5	47.0	45.8	47.0	45.9	43.8	42.4
Stimulants	27.4	30.1	29.1	25.3	24.4	21.2	19.3	27.2	33.5	36.6	39.7	42.7	43.5	44.9	43.5	48.0	46.8	48.9	44.4	40.1
Crystal Meth. (Ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.9	57.6	55.2	45.2	47.1
Sedatives	35.7	39.5	37.9	38.1	32.2	30.9	34.4	40.1	45.1	50.4	50.8	50.0	52.9	52.6	50.0	—	—	—	—	—
Barbiturates	36.7	40.7	40.4	40.9	36.4	38.2	41.6	46.6	47.5	50.5	50.0	50.0	51.4	52.2	49.2	50.0	45.2	49.1	46.0	41.4
Methaqualone	37.0	39.7	38.8	38.0	28.9	24.2	28.3	36.4	46.5	54.2	58.2	59.6	62.5	60.6	51.9	69.6	61.5	62.5	75.0	42.9
Tranquilizers	37.6	38.7	40.0	41.8	41.1	42.8	45.6	50.0	48.1	50.8	48.7	46.8	49.5	48.9	50.0	51.4	50.0	53.3	45.3	43.9
Alcohol[a]	6.2	6.7	5.9	5.8	5.3	5.7	6.0	6.5	5.7	7.1	7.2	7.4	7.0	7.3	8.8	9.9	11.7	12.2	12.6 9.1	— 9.2
Been Drunk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.4	20.7	20.6	17.8
Cigarettes[b]	16.0	16.7	16.2	17.9	19.6	21.4	20.8	19.1	18.6	18.5	15.9	17.0	17.1	18.2	18.5	18.2	17.4	18.6	16.9	15.9
Smokeless Tobacco[b]	—	—	—	—	—	—	—	—	—	—	—	21.8	18.4	25.7	26.2	—	—	29.6	25.5	33.1
Steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.7	41.4	33.3	47.6	40.0	45.8

NOTE: "—" indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] In 1993, the question text was changed slightly in three forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on three of six questionnaire forms. In 1994, data were based on all six questionnaire forms.

[b] Percentage of regular users (ever) who did not use at all in the last thirty days.

- For ***crack***, statistics exist only since 1987, but they also show a sharp rise in noncontinuation, from 28% in 1987 to 52% in 1991. Since then, the noncontinuation rate has fallen to 37%.

- Noncontinuation of ***stimulant*** use rose between 1982 (27%) and 1992 (49%). (Earlier data, based on the unrevised questions, suggest that the change began after 1981.) Since 1992 it has fallen to 40%.

- Much of the recent decline in ***sedative*** use is also accounted for by a changing rate of noncontinuation for the specific substances involved. For example, in the case of ***barbiturates*** the noncontinuation rate rose from 36% in 1979 to 52% in 1988, then declined to 41% in 1994. Similarly in 1980, 24% of the seniors who ever used ***methaqualone*** did not use in the prior year, but by 1993 that figure was up to 75%. In 1994 the figure fell to 43%, but these rates are now based on the very few users who answer one of the six questionnaire forms.

- ***Tranquilizer*** users showed a steady, gradual increase in their noncontinuation rates between 1975 and 1982, from 38% to 50%. Then until 1992, there was little further systematic change. Since 1992, though, there was some decline, from 53% in 1992 to 44% in 1994.

- For ***LSD*** the noncontinuation rate has fluctuated within a rather narrow range (between 34% and 41%) since 1981, without any clear trending.

- After 1987 there was a slight increase in the noncontinuation rate for ***smokeless tobacco***.

- ***Steroid*** use appears to have had an increase in noncontinuation in 1992, a year in which there was an increase in the perceived dangers of using steroids, but the rate has dropped back some since.

- It is worth noting that, although ***alcohol*** has always had an extremely low rate of noncontinuation, that rate has been increasing gradually in recent years, perhaps reflecting the changed norms regarding its use (see Chapter 8) which in turn may reflect the impact of changing the drinking age laws in a number of states. There was no further change in 1994.

- Table 17 provides noncontinuation rates for seniors who were more established users–that is, for those who reported having used the drug ten or more times in their life. It shows that noncontinuation is far less likely among such heavier users than among all users of a given drug. Further, while the trends in noncontinuation mentioned above generally have been similar to trends observed in the noncontinuation

TABLE 17
Trends in Noncontinuation Rates Among Twelfth Graders Who Used Drug Ten or More Times in Lifetime

	Percent who did not use in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Marijuana/Hashish	4.0	4.0	4.1	3.7	4.6	5.4	7.2	7.6	8.3	8.8	7.8	7.9	9.2	9.9	10.6	12.3	10.5	10.9	7.8	5.0
Inhalants	—	48.9	42.6	34.6	23.8	25.2	23.8	27.2	23.1	23.4	25.8	15.3	21.1	21.5	25.9	24.0	23.7	28.6	21.8	26.4
Nitrites[a]																				
Hallucinogens	10.8	16.1	15.2	10.8	8.1	8.4	7.7	7.5	13.0	14.1	12.2	11.1	11.9	16.6	21.8	16.5	17.4	11.5	12.1	14.3
LSD	15.2	17.3	18.0	12.2	7.4	6.4	7.1	7.5	15.3	12.1	12.6	12.2	11.5	16.0	21.2	16.0	18.5	11.4	11.9	15.3
PCP[a]																				
Cocaine	7.7	8.2	6.2	3.8	3.1	3.1	3.1	2.9	6.2	3.1	2.5	3.5	7.6	11.4	11.3	19.6	25.3	20.2	14.1	22.9
Crack[b]	—	—	—	—	—	—	—	—	—	—	—	—	13.4	2.1	5.2	26.2	31.1	15.3	16.4	16.8
Other Cocaine	—	—	—	—	—	—	—	—	—	—	—	—	10.2	6.1	16.2	18.5	24.3	23.2	14.7	24.1
Heroin[a]																				
Other Opiates	9.6	11.6	9.7	9.9	8.7	10.8	10.1	13.5	16.4	15.4	12.2	13.8	15.6	19.3	15.2	15.9	16.1	16.8	16.7	16.8
Stimulants	8.0	9.8	7.6	7.4	6.1	4.1	4.4	8.4	10.7	12.7	17.5	17.6	17.5	16.0	17.4	18.1	17.2	19.8	13.5	13.8
Crystal Meth. (Ice)[a]																				
Sedatives[c]	13.6	16.2	12.4	12.8	8.6	10.5	7.6	8.6	16.4	20.8	23.6	19.7	23.1	25.2	17.3	—	—	—	—	—
Barbiturates	13.4	16.6	12.9	13.5	11.2	11.7	8.9	12.6	17.7	22.8	20.6	19.7	20.7	23.4	18.0	19.8	19.7	23.4	11.0	14.9
Methaqualone[c]	13.5	15.9	11.9	13.1	6.1	6.0	4.9	8.0	16.3	23.3	26.7	24.9	32.2	29.8	18.6	—	—	—	—	—
Tranquilizers	12.0	13.0	11.1	14.4	14.1	14.3	16.3	16.0	14.8	18.8	19.2	16.0	17.1	15.8	11.7	19.3	13.1	21.0	6.7	13.8
Alcohol[d]	0.6	0.8	0.6	0.9	0.7	0.8	1.0	0.9	0.9	1.1	1.2	1.0	1.1	1.2	1.5	1.9	1.9	2.3	2.3 2.5	— 2.1
Been Drunk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	4.1	4.6	3.3
Steroids[a]																				

NOTE: "—" indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] The cell entries in these rows were omitted because they were based on fewer than 50 seniors who used ten or more times. All other cells contain more than 50 cases.

[b] Based on 85 cases in 1987, 54 cases in 1988, and 56 cases in 1989. Crack was included in all six questionnaire forms in 1990-1994.

[c] Based on too few cases in 1990-1994, because this question was asked in only one of the six questionnaire forms.

[d] In 1993, the question text was changed slightly in three forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on three of six questionnaire forms. In 1994, data were based on all six questionnaire forms.

rates for heavier users of those same drugs, the percentage fluctuations have tended to be considerably smaller among the heavier users.

The reader is cautioned that the number of cases in each cell in Table 17 is considerably smaller than in most other tables–particularly when overall usage rates are low to start with; therefore the trend data are much more uneven.

- Noncontinuation rates for experienced users of ***inhalants*** actually dropped in the late 1970's, perhaps as a result of the nitrites–which are used at older ages than most of the other inhalants–coming onto the scene. However, when the nitrites left the scene during the 1980s, the noncontinuation rates for experienced users failed to increase.

- Note the sharp rise in the late 1980s in the noncontinuation rates for ***cocaine*** and ***crack***, even among these more experienced users. The rates peaked by 1991.

COMPARISONS AMONG SUBGROUPS IN TRENDS IN PREVALENCE

Trend comparisons are given below for population subgroups defined on the following dimensions: sex, college plans, region of the country, population density, racial/ethnic group, and socioeconomic status. In general, we will focus on the results from twelfth graders, because there is a much shorter trend interval available for eighth and tenth graders. Appendix C to this volume contains tables providing subgroup trends for all three grade levels.

Sex Differences in Trends

- Most of the sex differences mentioned earlier for individual classes of drugs have remained relatively unchanged over the past twenty years—that is, any trends in overall use have been fairly parallel for both males and females. There are, however, some exceptions (tabular data not shown).

- The absolute differences between the sexes in ***marijuana*** use narrowed somewhat between the 1970s and 1980s, although both sexes saw a similar decline in use from 1979 to 1992. Both sexes also showed an increase in marijuana use since 1992, and this has been true at all three grade levels.

- Between 1975 and 1977 there was a small sex difference in ***tranquilizer*** use (females this age used them more frequently than males). This difference virtually disappeared by 1978, and there has been no sex difference since. There has been a slight sex difference in lower grades, with higher use among females.

- The sex differences in ***cocaine*** use were greatest in the peak years of use (1979 through 1986) and diminished considerably during the decline phase. Although the differences have lessened, males still use more frequently than females. There is no sex difference in eighth grade, and in tenth grade a slight one. Males also continue to have higher rates of ***crack*** use, but the difference has narrowed some since 1988.

- Regarding ***stimulant*** use, a sex difference emerged in 1981 and 1982 using the original version of the question; but the revised question introduced in 1982 showed no sex difference, suggesting that over-the-counter diet pills accounted for the higher use among females in those two years. Since 1982 the rates for the two sexes have remained very close with both sexes showing a substantial decrease in use through 1992, and both showing an increase in use since then. In eighth and tenth grades reported use is higher among females, but both sexes show a rise in use at all grades.

- Sex differences in the use of ***opiates other than heroin*** have narrowed in recent years to the point of very little difference. (Males have almost always had higher rates of use.)

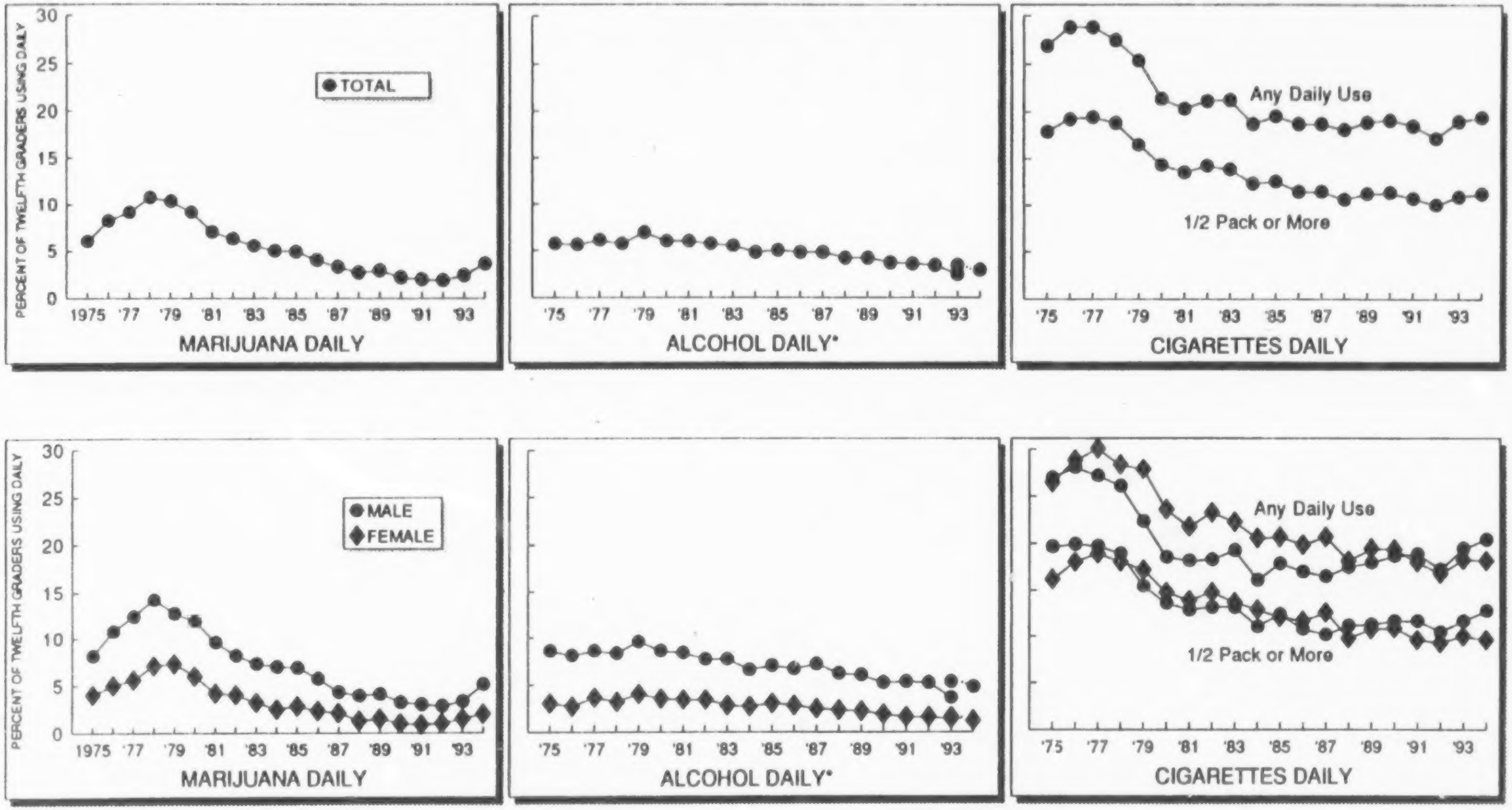
- The proportion of males who used ***any illicit drug*** in the prior year rose between 1975 and 1978, and then declined steadily to 29% in 1992 (see Figure 12). Use among females peaked later, increasing from 41% in 1975 to 51% in 1981 and then dropped to 25% in 1992. (If amphetamine use is not included in the statistics, use by females peaked earlier [in 1979] and then declined as well.) Both male and female rates were up in 1994, to 39% and 33%, respectively. The earlier declines for both sexes were attributable largely to the declining marijuana use rates; the later declines (through 1992) were due to decreases in use of the other illicit drugs (primarily cocaine), in addition to marijuana. The more recent increases are due to increases in marijuana use in 1994 as well as increases in several other drugs in 1993.

- Although trends tend to remain fairly parallel, when amphetamine use is excluded from the calculations for ***illicit drugs other than marijuana***, somewhat different levels emerge for males and females. Male use is higher.

- The sex differences in ***alcohol*** use have narrowed slightly since 1975. For example, differences in annual prevalence (males were higher) nearly have been eliminated. The 30-day prevalence rates for males and females differed by 12.8 percentage points in 1975 (75.0% vs. 62.2%, respectively), but that difference was down 8.2 percentage points by 1993 (54.9% vs. 46.7%). Although substantial sex differences in

FIGURE 10

Trends in Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Cigarettes for Twelfth Graders
by Total and by Sex



NOTE: Daily use for alcohol and marijuana is defined as use on 20 or more occasions in the past thirty days. Daily use of cigarettes is defined as smoking one or more cigarettes per day in the past thirty days.

*The dotted lines connect percentages which have been adjusted. See text for details.

FIGURE 11

Trends in Two-Week Prevalence of Heavy Drinking Among Twelfth Graders
by Sex

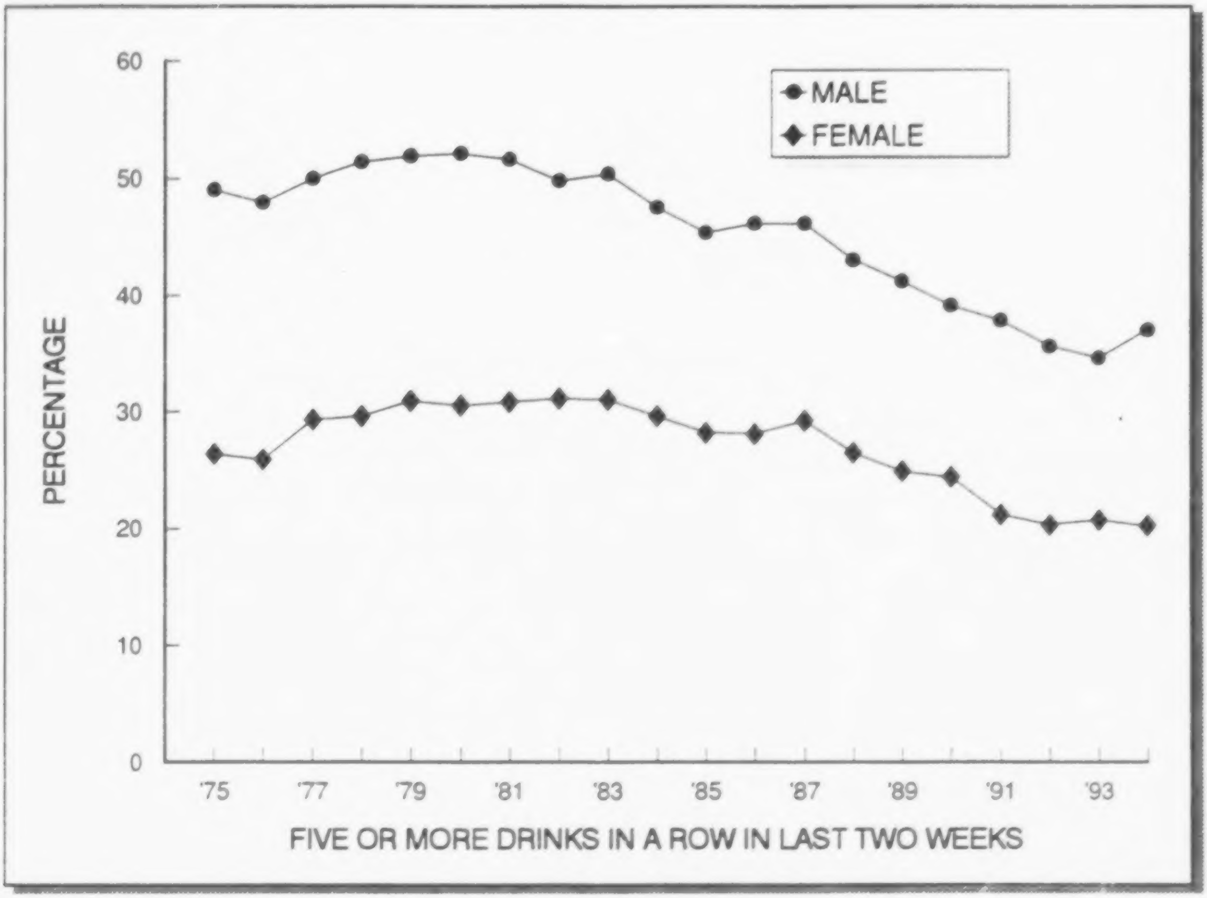
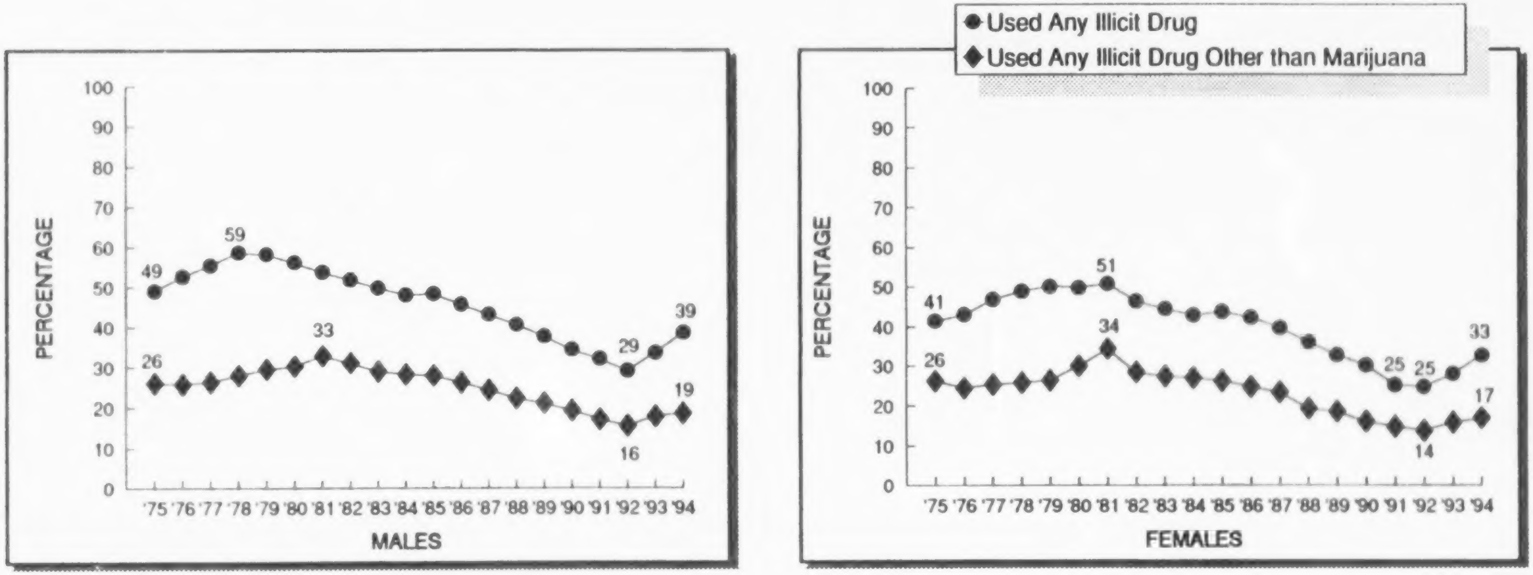


FIGURE 12

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders
by Sex



NOTE: See Figure 8 for relevant footnotes.

daily use and ***occasions of heavy drinking*** still remain, differences had narrowed there, too (Figure 11), until 1994, when binge drinking among males rose, while females declined slightly. For example, between 1975 and 1992 the proportion of males admitting to having five drinks in a row during the prior two weeks showed a net decrease of 14 percentage points (49% to 35%), whereas females decreased by only 5 percentage points, from 26% to 21%.[25] In 1994 rates are 37% and 20%.

- On one of the six questionnaire forms administered to the twelfth graders, respondents are asked separately about their use of beer, wine, and hard liquor. The answers to these questions reveal that different amounts of beer consumption account for much of the large sex differences in occasions of heavy drinking: 36% of 1994 senior males report having ***five or more beers*** in a row during the prior two weeks vs. 16% of the females. Males are also somewhat more likely than females to report having ***five or more drinks of hard liquor*** (22% for males vs. 13% for females) but equally likely to drink ***wine*** that heavily (5% for both males and females). This pattern—a large sex difference in heavy use of beer, a smaller difference in heavy use of hard liquor, and very little difference in heavy use of wine—has been present throughout the study, with little systematic change over time. More recently questions on ***wine coolers*** were added; 7% of the males and 10% of the females drank five or more in a row in the past two weeks.

  In the lower grades, male eighth and tenth graders also showed an increase in ***binge drinking*** since 1992. Females in eighth grade also show some signs of an increase.

- In 1976 we observed that, among twelfth graders, females caught up to males in ***daily cigarette smoking*** (see Figure 10). Between 1977 and 1981, both sexes showed a decline in the prevalence of such smoking, but use among males dropped slightly more, resulting in females having a higher rate of daily smoking until 1990. More importantly, both sexes at all three grade levels have shown a rise in 30-day and daily smoking since 1991 or 1992. For the last four years (1991-1994), males' smoking rates have grown higher than females'.

Trend Differences Related to College Plans

- Both college-bound and noncollege-bound students have shown fairly parallel trends in overall ***illicit drug use*** over the years (see Figure

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[25] It is worth noting that the same number of drinks produces substantially greater impact on the blood alcohol level of the average female than the average male, because of sex differences in the metabolism of alcohol and body weight. Thus, sex differences in frequency of actually getting drunk may not be as great as the binge drinking statistics would indicate, since they are based on a fixed number of drinks.

13).[26] In 1993, there was a sharper increase in use of any illicit drug among the college-bound twelfth graders, but in 1994, both groups increased significantly.

- Changes in use of the ***specific drug classes*** also have been generally parallel for the two groups since 1976, with only minor exceptions (see Appendix C). Between 1983 and 1986 annual ***cocaine*** use increased very little among the college-bound, but rose by about one-quarter among the noncollege-bound, perhaps due to the greater popularity of crack among the noncollege-bound. After 1986 both groups showed large declines in use, and some convergence in their rates of use.

- In fact, as the overall prevalence of a number of drugs fell through 1992 there was some convergence of usage rates between the college-bound and noncollege-bound, due to a greater drop among the latter group. This was true for ***tranquilizers***, ***sedatives, methaqualone, stimulants, barbiturates, nitrite inhalants, hallucinogens other than LSD, LSD,*** and ***opiates other than heroin.*** As some of these drugs began to increase in use after 1992, the differences have grown larger (e.g., stimulants, opiates other than heroin).

- The rise in annual prevalence for ***LSD*** in 1992 was due entirely to a rise among the noncollege-bound. However, in 1993, they held steady while a sharp increase occurred among the college-bound, once again narrowing the gap between them. In the two lower grades, most of the increase in LSD use between 1991 and 1994 occurred among the noncollege-bound, and the differences in usage rates between the two groups are much larger than in twelfth grade.

- The ***binge drinking*** rates of the two groups have converged modestly since 1981, though the rate for the college-bound is still considerably lower. In eighth and tenth grade there are larger differences in binge drinking rates, and they are diverging because the noncollege-bound binge more.

- Until 1993, rates of ***cigarette smoking*** remained widely disparate between the two groups of seniors. Then, significant increases in 30-day (3.5 percentage points) and daily use (3.0 percentage points) among the college-bound seniors narrowed the differences. The noncollege-bound showed slight decreases in both measures. In the next year, 1994, the 30-day prevalence rate for noncollege-bound seniors rose significantly by 3.6 percentage points, but daily prevalence rates for the non-college bound seniors increased only a little. In eighth and tenth

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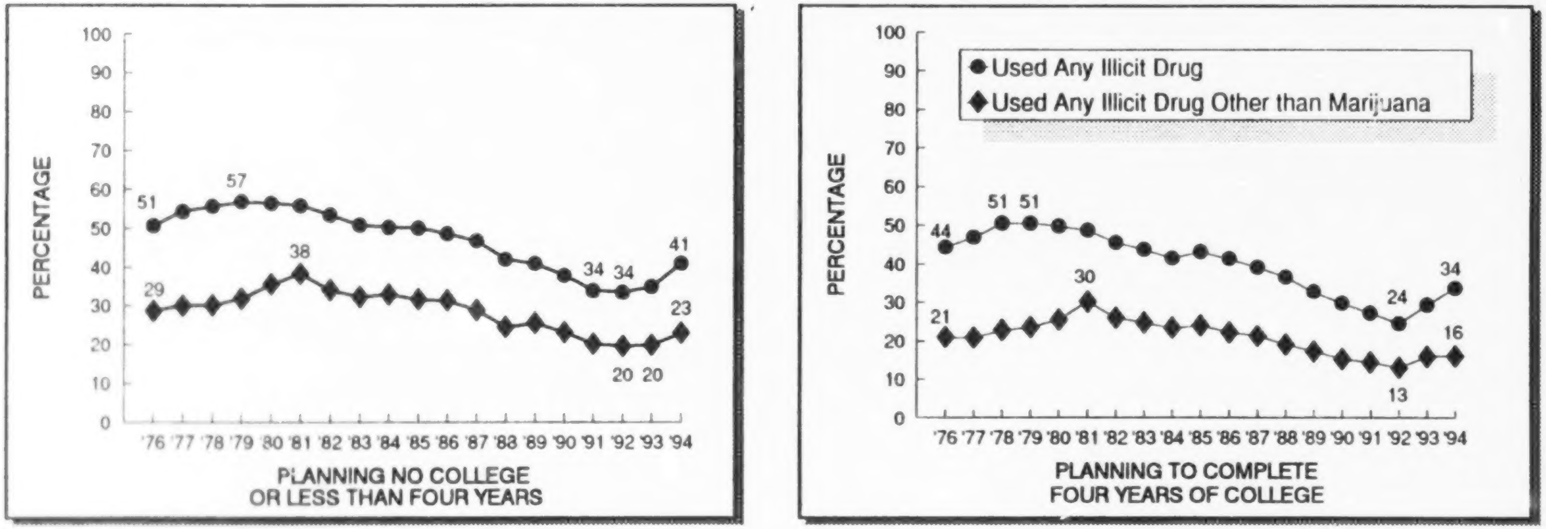
[26] Because of excessive missing data in 1975 on the variable measuring college plans, group comparisons are not presented for that year.

FIGURE 13

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders

by College Plans



NOTE: See Figure 8 for relevant footnotes.

grade there are even larger proportional differences in smoking between the two groups, but both have been showing increases since 1991.

- Among seniors ***steroid*** use has declined some in both groups since 1989 when it was first measured, but at the eighth and tenth grade levels use in both groups is stable.

Regional Differences in Trends

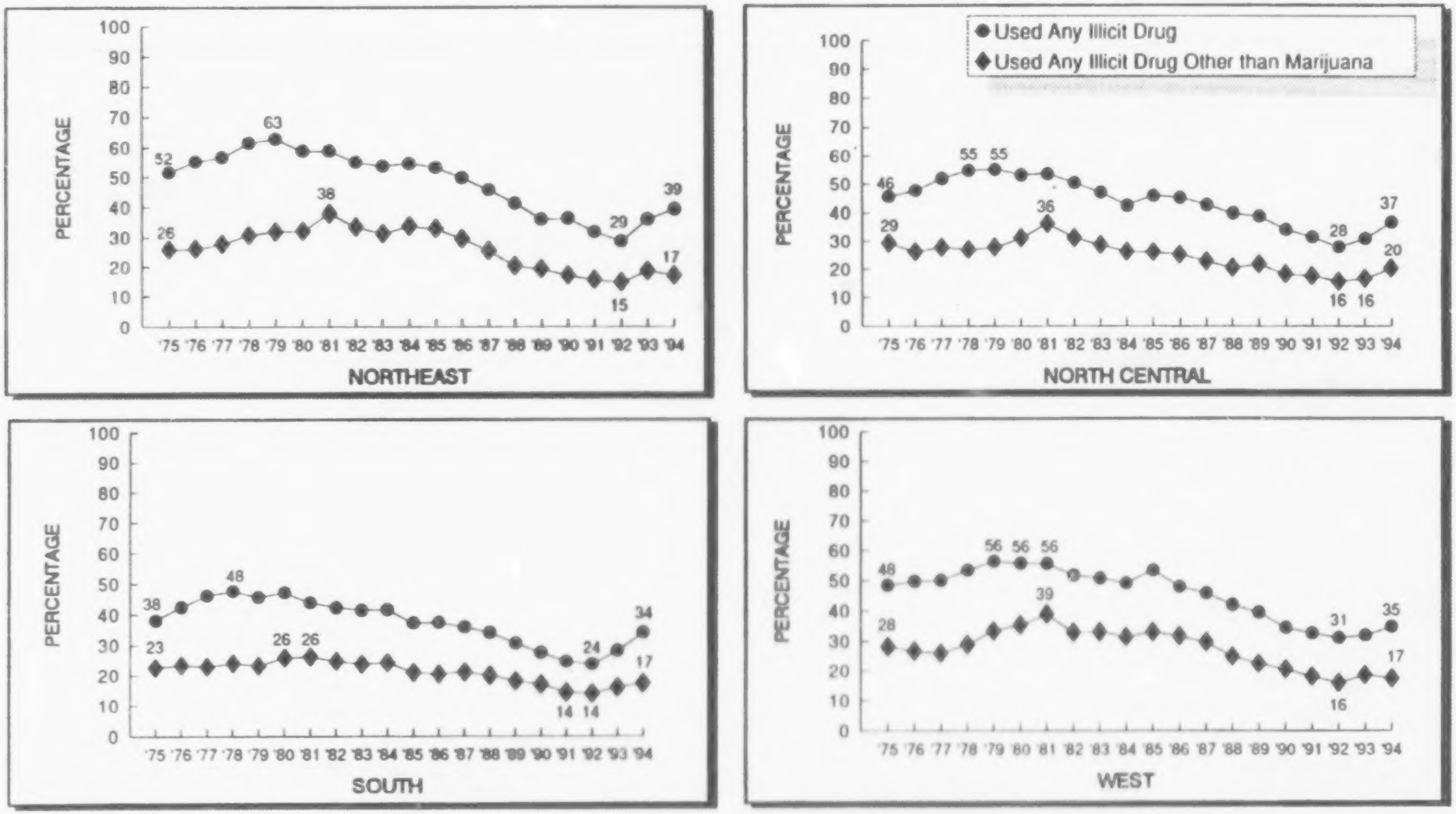
- In all four regions of the country proportions of high school seniors using ***any illicit drug*** during the year reached their peaks in 1978 or 1979 (Figure 14a), and generally fell. While current rates of use are lower than in the peak years, since 1992 use of any illicit drug has been increasing in all four regions, and at all three grade levels.

- As noted, a major factor in the early rise of ***illicit drug use other than marijuana*** was an increase in reported ***amphetamine*** use. The rise in amphetamine use among seniors appeared in all four regions; however, the rise in lifetime prevalence from 1978 to 1981 was only 6% in the South, whereas in the other regions the percentages rose between 9% and 12%. In essence, the South was least affected by both the rise and the fall in reported amphetamine use. (After 1981 all four regions showed substantial declines until 1993, when they all showed an increase.) Then around 1984 and 1985, when the cocaine and crack epidemics were at their peaks, it was the Northeast and the West which were most affected and showed some increase on this illicit drug use index.

- ***Cocaine*** use has shown very different trends in the four regions of the country leading to the emergence of one of the largest regional differences observed for any of the drugs (see Figure 14b for differences in lifetime prevalence trends). In the mid-1970s, there was relatively little regional variation in cocaine use. As the nation's cocaine epidemic grew large regional differences emerged. By 1981 annual use had roughly tripled in the West and Northeast, nearly doubled in the North Central, and increased "only" by about 30% in the South. This pattern of large regional differences held for about six years, until a sharp decline in the Northeast and the West substantially reduced them. In 1993 the West showed a small increase in cocaine levels at all three grade levels; the other regions were stable for the most part. The North Central region showed a significant increase in annual use in 1994 for the twelfth graders. At the eighth and tenth grade levels there has been a modest increase in use in all regions since 1991 and 1992.

FIGURE 14a

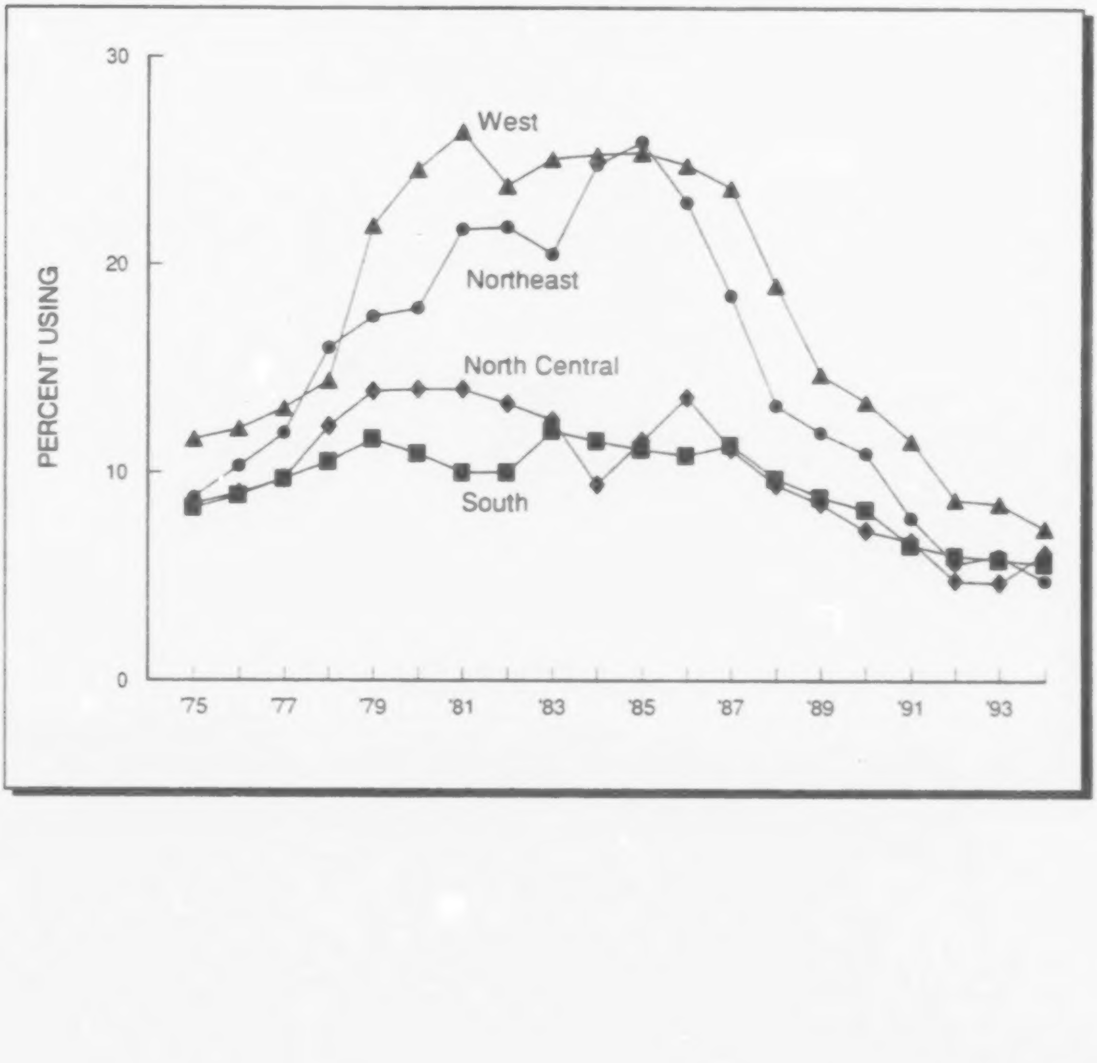
Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders by Region of the Country



NOTE: See Figure 8 for relevant footnotes.

FIGURE 14b

Trends in Lifetime Prevalence of Cocaine Use for Twelfth Graders
by Region of the Country



- Since ***crack*** use was first measured in 1987, its use has dropped in all four regions, but most in the West, which initially reported higher use rates than the other regions. Today little regional difference remains although the West still has the highest rate of use followed closely by the North Central. In eighth and tenth grade all regions except the North Central has shown some increase in crack use.

- ***Marijuana*** use has risen substantially in all four regions and at all three grade levels since 1991 and 1992.

- Between 1975 and 1981, sizeable regional differences in ***hallucinogen*** use emerged, as use in the South dropped appreciably. In 1981, both the North Central and the West had annual rates that were about two and one-half times higher than the South (10.3%, 10.4%, and 4.1%, respectively) and the Northeast was three times as high (12.9%). After 1981, hallucinogen use dropped appreciably in all regions except the South (which continued to be lowest), considerably reducing these regional differences. In the 90's, use has been consistently lower than average in the South, but the differences among the other three regions have been small. At present, use of ***LSD*** does not vary much by region.

- Between 1979 and 1982, ***PCP*** use dropped precipitously in all regions. The drop was greatest in the Northeast, which in 1979 had a usage rate roughly double that of all the other regions. In general, PCP use has remained low since 1982.

- All four regions have shown a substantial decline in current ***alcohol*** use and in occasions of ***binge drinking*** from the early 80's to the early 90's. However the relative positions of the four regions have remained generally unchanged, which means that the South and the West have the lowest rates; the Northeast and North Central the highest. In 1993 and 1994 there was a leveling of use in all four regions.

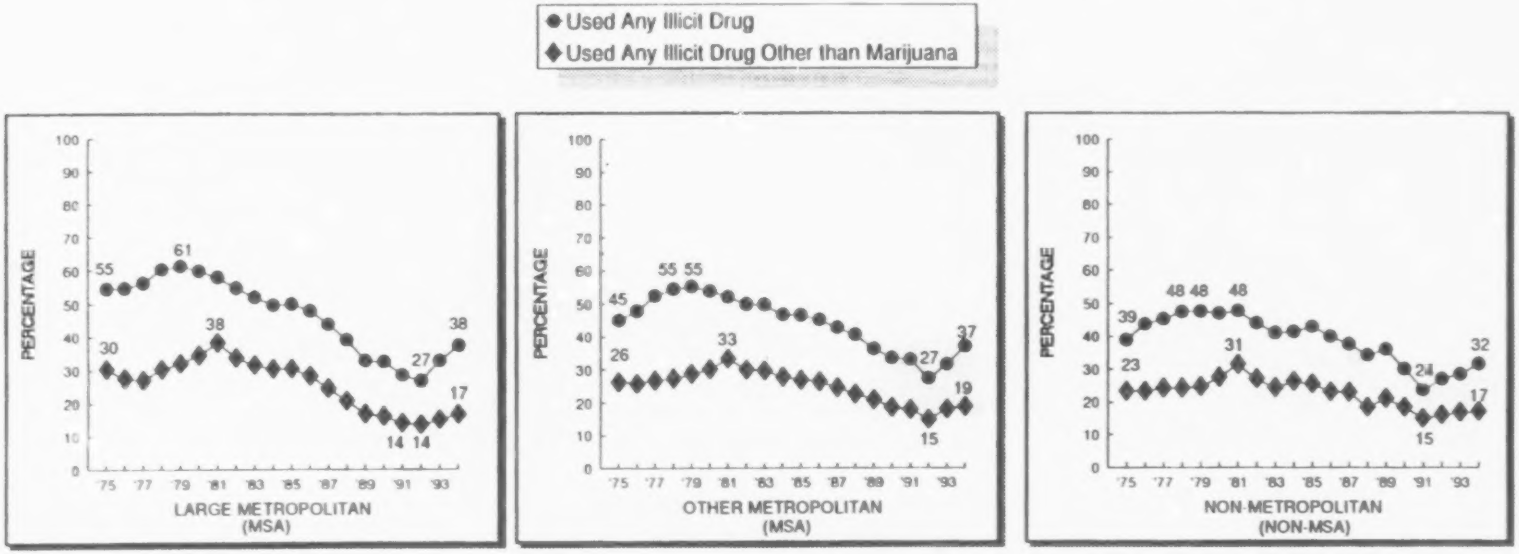
- It is noteworthy that from 1992-1994—a period of overall increase in cigarette smoking— the West was the only region which did not show an increase in ***daily smoking*** in twelfth grade. The lack of increase in the West may be due to the fact that California conducted a major anti-smoking campaign in recent years.

Trend Differences Related to Population Density

- Proportions of seniors using ***any illicit drug*** in all three levels of community size peaked in 1979 (Figure 15a). Although the smaller metropolitan areas and the nonmetropolitan areas never closed the gap between their counterparts in the large metropolitan areas at the peak

FIGURE 15a

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders
by Population Density

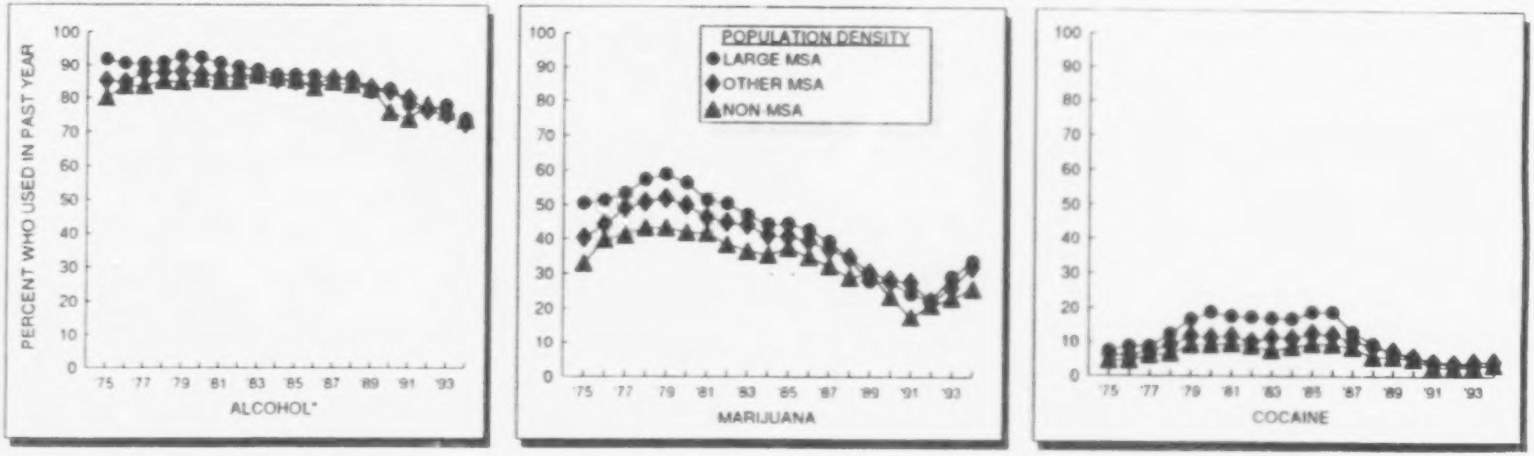


NOTE: See Figure 8 for relevant footnotes.

FIGURE 15b

Trends in Annual Prevalence of Alcohol, Marijuana, and Cocaine Use for Twelfth Graders

by Population Density



*1993 data points are based on the data from the questionnaire forms containing the original wording of the alcohol questions, 1994 data points are based on the revised alcohol questions. See text for details.

levels, they did narrow it considerably. Most of that narrowing was due to changing levels of marijuana use, and most of it occurred prior to 1978. All three levels of community size showed increases in 1993 and 1994 on the any illicit drug use measure.

- The overall proportion of twelfth grade students involved in ***illicit drug use other than marijuana*** also peaked in communities of all sizes in 1981 or 1982, and then fell. In recent years the large metropolitan areas actually showed slightly lower rates than the other two strata—a reversal of earlier differences. In 1993 and 1994 all three levels increased slightly.

- During the years in which use of various drugs increased, significant differences emerged among the three levels of urbanicity in use of a number of classes of drugs. In more recent years, those differences narrowed, as use rates declined. Figure 15b shows the trends for annual prevalence of alcohol, marijuana, and cocaine.

- The increase in ***cocaine*** use between 1976 and 1979, although dramatic at all levels of urbanicity, was clearly greatest in the large cities. Between 1980 and 1984, use was fairly stable in all groupings, and in 1985 it showed a rise in all groupings. In 1986 they all stabilized again, and in 1987, began a decline. Just as the earlier rise had been greatest in the large cities, so was the decline (see Figure 15b). Today there are only small differences by urbanicity in cocaine use among seniors.

- Use of ***crack*** has declined more among the large cities than in the smaller areas. Since 1986, when it was first measured, annual use is down by 4.5 percentage points (from 5.9% to 1.4%) in the large cities, and is down 1.5 percentage points (to 2.0%) and by 1.6 percentage points (to 1.9%) in the other cities and nonmetropolitan areas, respectively. There was no significant change in 1994 specifically.

- There is evidence of a decline in current ***alcohol*** use in the large cities in recent years–one which has narrowed considerably the differences between areas. For example, 30-day prevalence in the large cities was down by 26 percentage points, from 78% in 1980 to 52% in 1993. The smaller metropolitan areas decreased 21 percentage points (from 71% to 50% in 1993) and the nonmetropolitan areas dropped by 17 percentage points (from 69% to 52% in 1993). Since then the three strata have not seen further decline.

- In the late 1970s ***PCP*** use was correlated with community size, but since 1981 there has not been a consistent relationship.

- ***Marijuana*** use also showed a convergence among the three urbanicity groups by 1989 (Figure 15b). Use consistently has been correlated positively with community size. The greatest differences occurred in one of the peak years of usage, 1978. After that both the absolute and proportional differences diminished through 1992 and the more urban areas exhibited a greater decline. In 1993 communities in all size categories showed a turnaround in marijuana use; in fact, the turnaround began a year earlier in the non-metropolitan areas. As use has risen, greater differences related to urbanicity appear to be emerging.

- In the last half of the 1970s, the use of ***opiates other than heroin*** was consistently highest in the large metropolitan areas and lowest in the nonmetropolitan areas. In recent years there has been no consistent difference among these groups.

- The remaining illicit drugs show little systematic variation in trends related to population density.

Differences in Trends by Socioeconomic Status

The measure of socioeconomic status used in this study–namely, the average educational attainment level of the respondents' parents–was described in the previous chapter. Five different strata are distinguished and the students are sorted into those strata based on the educational level of their parents. It should be noted that the overall average educational level of parents has been rising, thus each of the five categories contains a slowly changing proportion of the sample. Figures 16a through 16f show trends for six selected measures of drug use.

- In general there has been little change over time in the relationship between the socioeconomic status (SES) of the family of origin and prevalence rates for most of the drugs.

- ***Marijuana*** use, for example, has had little association with socioeconomic level throughout the life of the study, except that the lowest level of SES has consistently had a slightly lower prevalence rate. (This may in fact be due as much to a difference in the ethnic composition of this stratum, as we will see in the next section, than to social class differences.) All levels have shown similar declines in use since the late 1970's (Figure 16a), and all levels increased in use in both 1993 and 1994.

- ***Cocaine*** has shown what is perhaps the largest and most important change in its association with socioeconomic status (Figure 16b). From 1975 through 1981 a strong positive association evolved between cocaine use and SES, with the greatest increase in use occurring in the highest SES group and the least increase in the lowest SES group.

From 1981 to 1985 use in the top SES levels declined, while use in the lowest SES group increased substantially between 1982 and 1985–an increase which likely reflected the introduction of the less expensive form of cocaine, crack.

The net effect has been that, since 1985, there has been no systematic association between overall cocaine use and socioeconomic status. The strong positive association which existed for roughly eight years disappeared. All SES levels showed a substantial decrease in cocaine use between 1986 and 1991, with little differential change since then. In the lower grades, the use of both crack and other cocaine is highest in the bottom SES level. Otherwise the differences are small. (This is also true at twelfth grade for crack.)

- Except for the fact that the lowest SES group has consistently been a bit lower in its use of ***LSD*** than the four other strata, there was little association between SES and the use of this drug over the interval from 1975, when the study began, through about 1984 (Figure 16c). As the overall usage level for LSD gradually increased after 1984, a positive association emerged, wherein the highest SES group is now almost twice as likely as the lowest SES group to have used LSD in the prior twelve months. Put another way, all strata have shown an increase in use since 1984 except the lowest SES group.

- There has been little difference across the five SES categories in reported use of ***inhalants*** (data not shown) although the top two categories have tended to have the highest prevalence rate in recent years, and the bottom category to have the lowest. All strata have shown parallel increases since 1983, and in the case of eighth and tenth grade, since 1991, when they were first surveyed.

- There has been little difference among the SES groups in their trends in ***amphetamine*** use, but there have been some slight changes. In recent years (1991 through 1994), the two or three highest SES groups have the lowest rates of amphetamine use. In earlier years (1976 through 1990), there was usually a curvilinear relationship, with the two lowest *and* the highest SES groups tending to be low in amphetamine use (Figure 16d). The 1994 increase in amphetamine use showed up in all social strata except the highest group. At the eighth and tenth grade levels, amphetamine use generally has been negatively correlated with SES and the recent increase in use may be found in all groups except the highest.

- The picture for ***alcohol*** use among high school seniors is similar to the one described earlier for marijuana: that is, there is little difference in the annual prevalence rates among the SES strata except that the lowest stratum has a lower prevalence than all the others; and they all move pretty much in parallel (data not displayed). The story for ***binge drinking*** is similar (Figure 16e). There is little difference in annual use, or in trends at the eighth and tenth grade levels as a function of SES. However, binge drinking has been negatively correlated with SES, with sizeable differences in eighth grade.

- From 1981 through 1985, ***daily use of cigarettes*** was ordinally and inversely related to SES, with each successively higher SES group smoking less (Figure 16f). Beginning in 1986, this ordinal relationship has held with only one exception. In the lowest SES group smoking has declined more than in the other groups, probably due to its racial composition, as will be discussed in the next section. The net result has been that the SES differences have narrowed since 1987. In eighth and tenth grade all strata, with only one exception, have shown an increase in their ***30-day smoking*** rates since 1991, when the first measurement was taken. The exception is the lowest SES stratum in eighth grade, where use has remained stable.

Racial/Ethnic Differences in Trends

While the three major racial/ethnic groups examined here—whites, blacks, and Hispanics–have quite different levels of use of some drugs, it appears that for almost all drugs, their use has trended in similar ways.[27] Data have been examined here for these three groups using two-year moving averages in annual prevalence in order to provide smoother and more reliable trend lines. Even then, they tend to be a bit "bumpy," especially for Hispanics for whom we have the least data and for whom there is a high degree of clustering by school in the sample.

- Figure 17a shows the trends in annual ***marijuana*** use for the three groups, and illustrates that they have generally moved in parallel–particularly during the long decline phase. Over the past several years, all three groups showed a rise in marijuana use at all three grade levels. In fact, African Americans, who started out with considerably lower usage rates, have greatly narrowed that gap during this period of upturn.

- Figure 17a also shows the long-term trends for annual ***cocaine*** use among twelfth graders. It clearly shows that the rise in cocaine use occurred more sharply among whites and Hispanics than among blacks. The decline among blacks appears to have begun earlier but, of perhaps greatest importance, all three groups participated in the sustained decline in cocaine use after 1986. ***Crack*** use declined in all three

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[27] A recent article looking at a larger set of ethnic groups used groupings of respondents from adjacent 5-year intervals to get more reliable estimates of trends. See Bachman, J.G., Wallace, J.M. Jr., O'Malley, P.M., Johnston, L.D., Kurth, C.L., & Neighbors, H.W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976-1989. *American Journal of Public Health, 81*, 372-377.

FIGURE 16a

Marijuana: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders

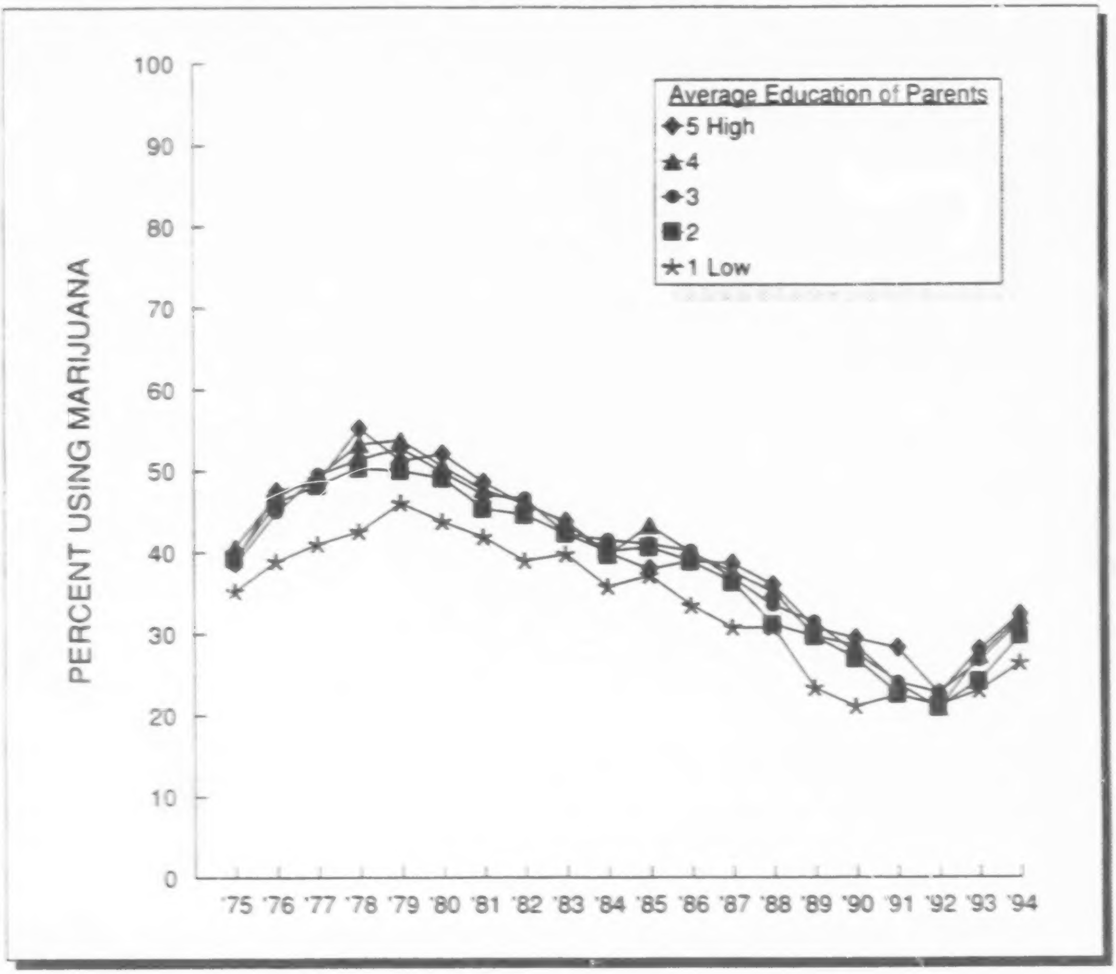
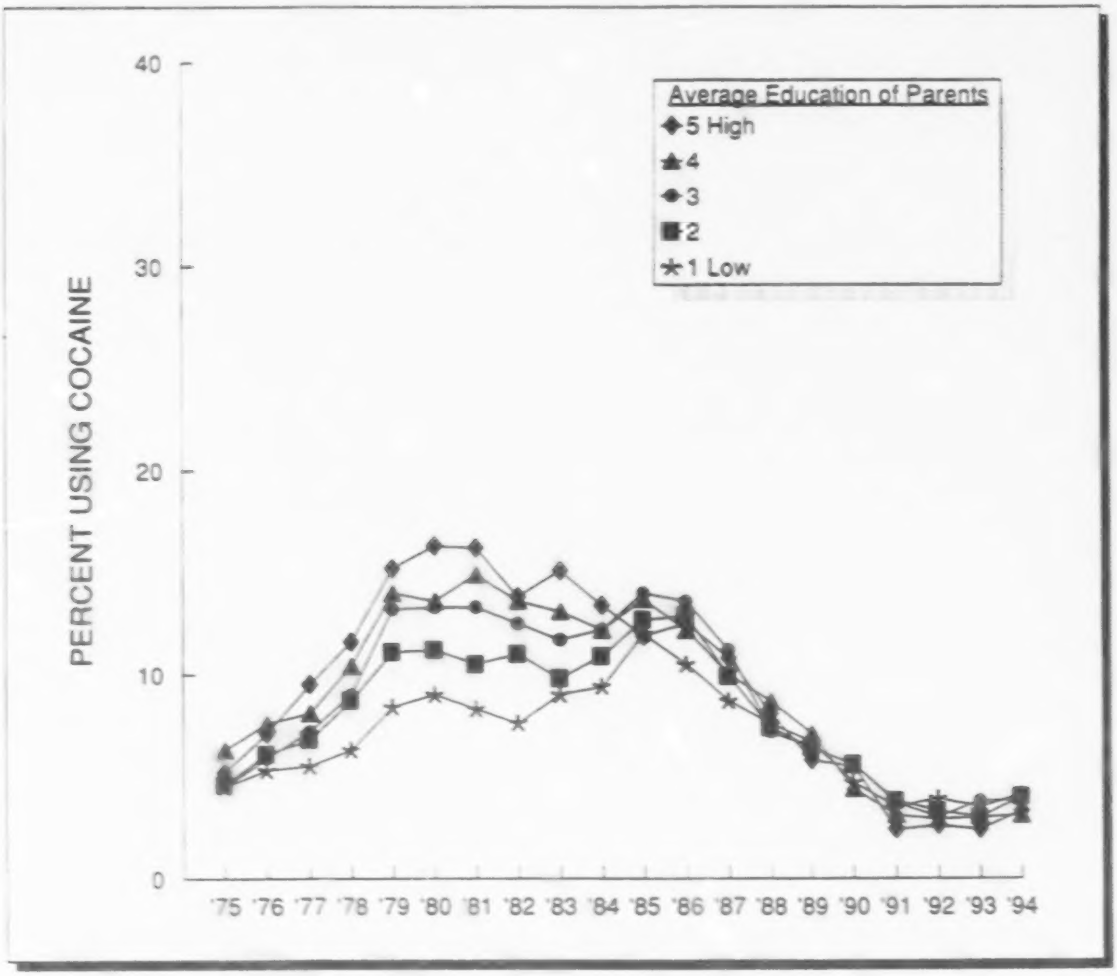


FIGURE 16b

Cocaine: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders



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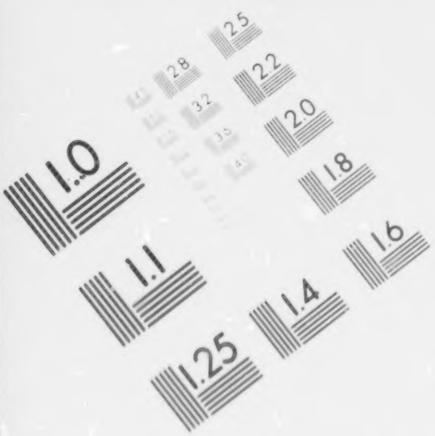
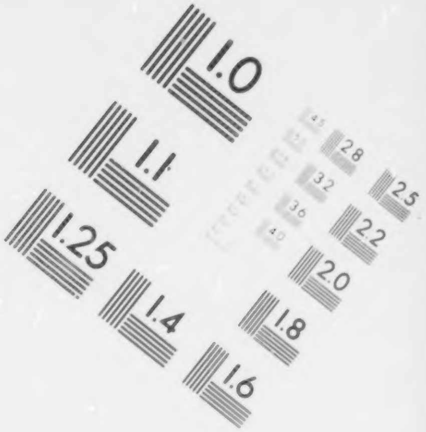

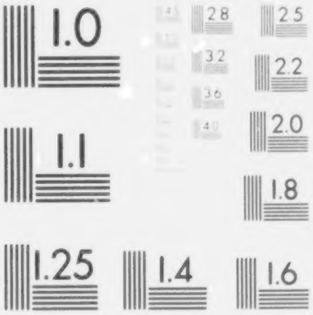

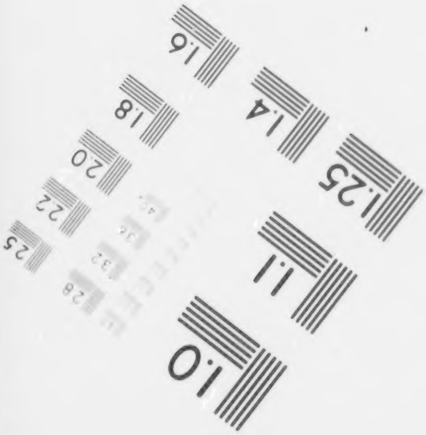
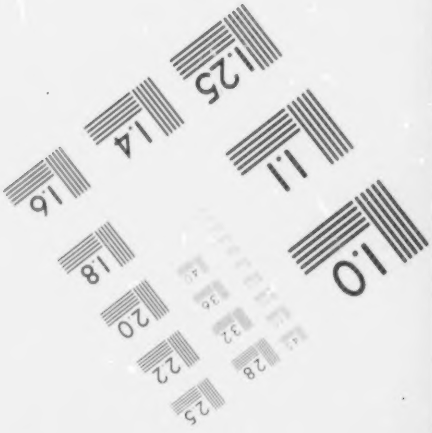

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FIGURE 16c

LSD: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders

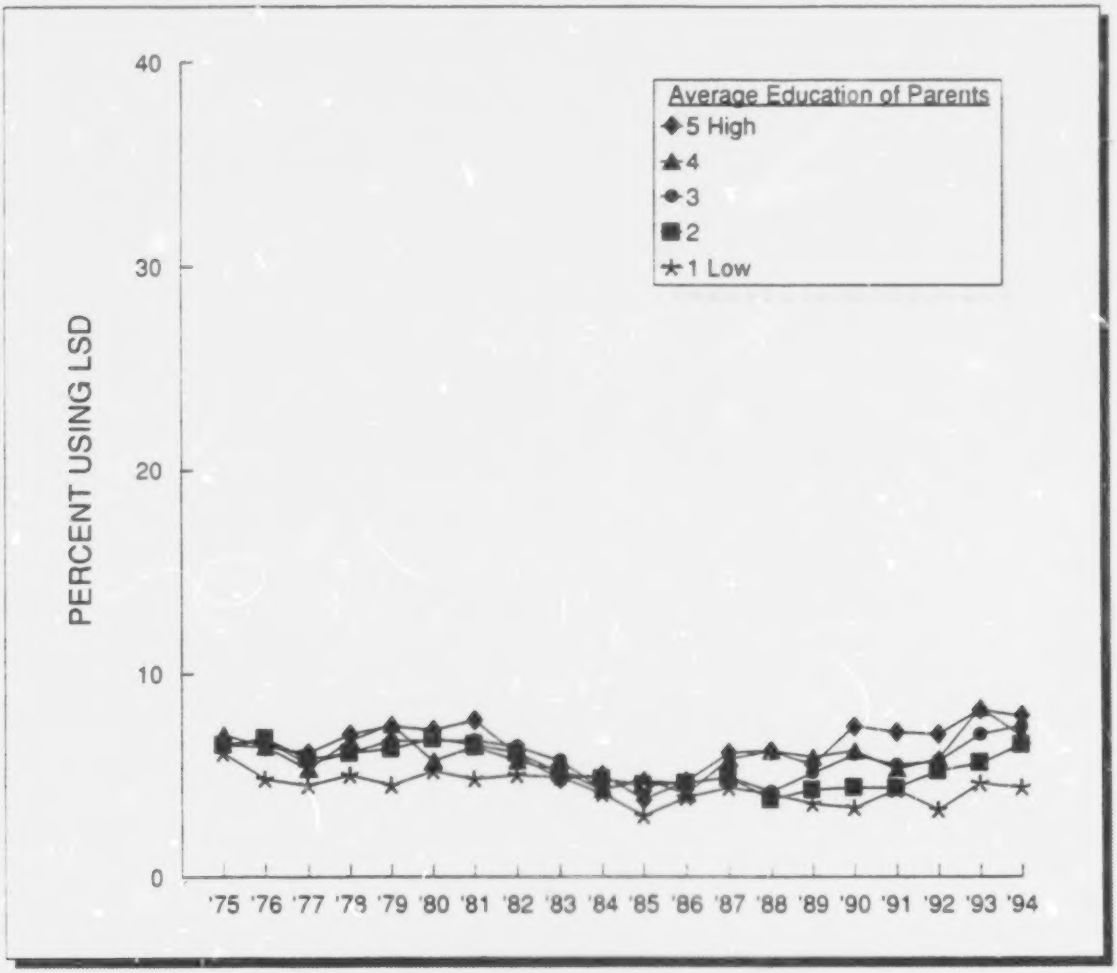
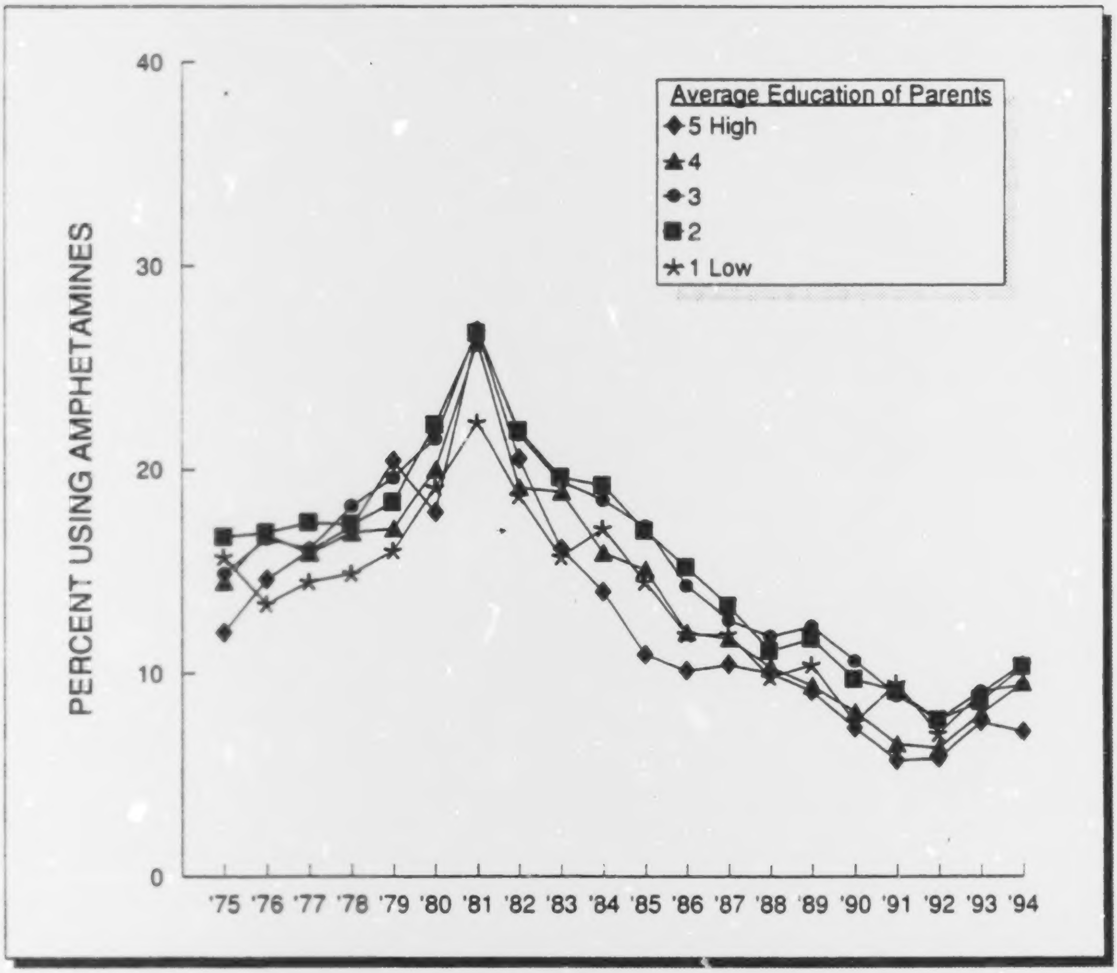


FIGURE 16d

Amphetamines: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders



NOTE: Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 16e

Heavy Drinking: Trends in Two-Week Prevalence of 5 or More Drinks in a Row by Average Education of Parents for Twelfth Graders

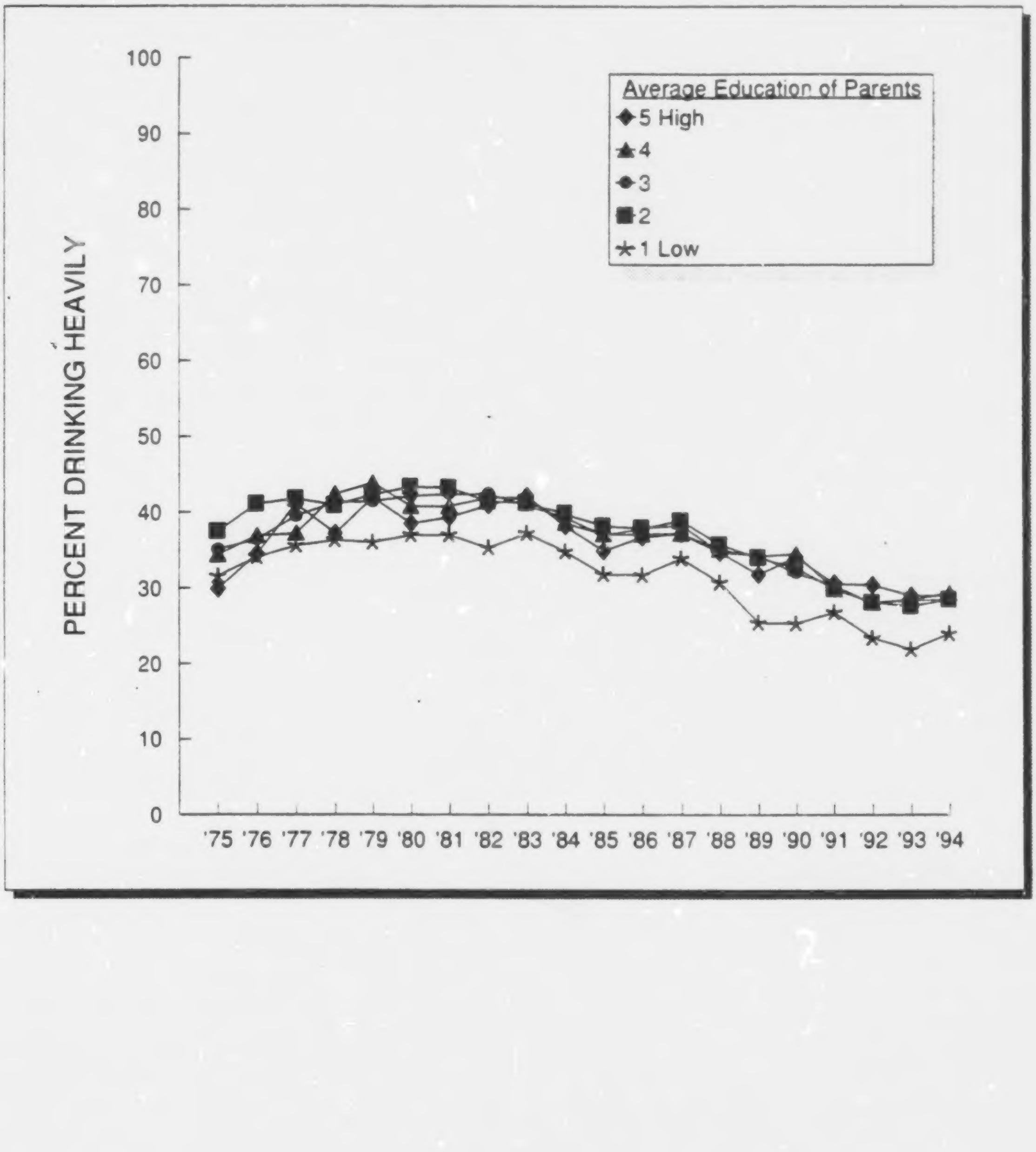
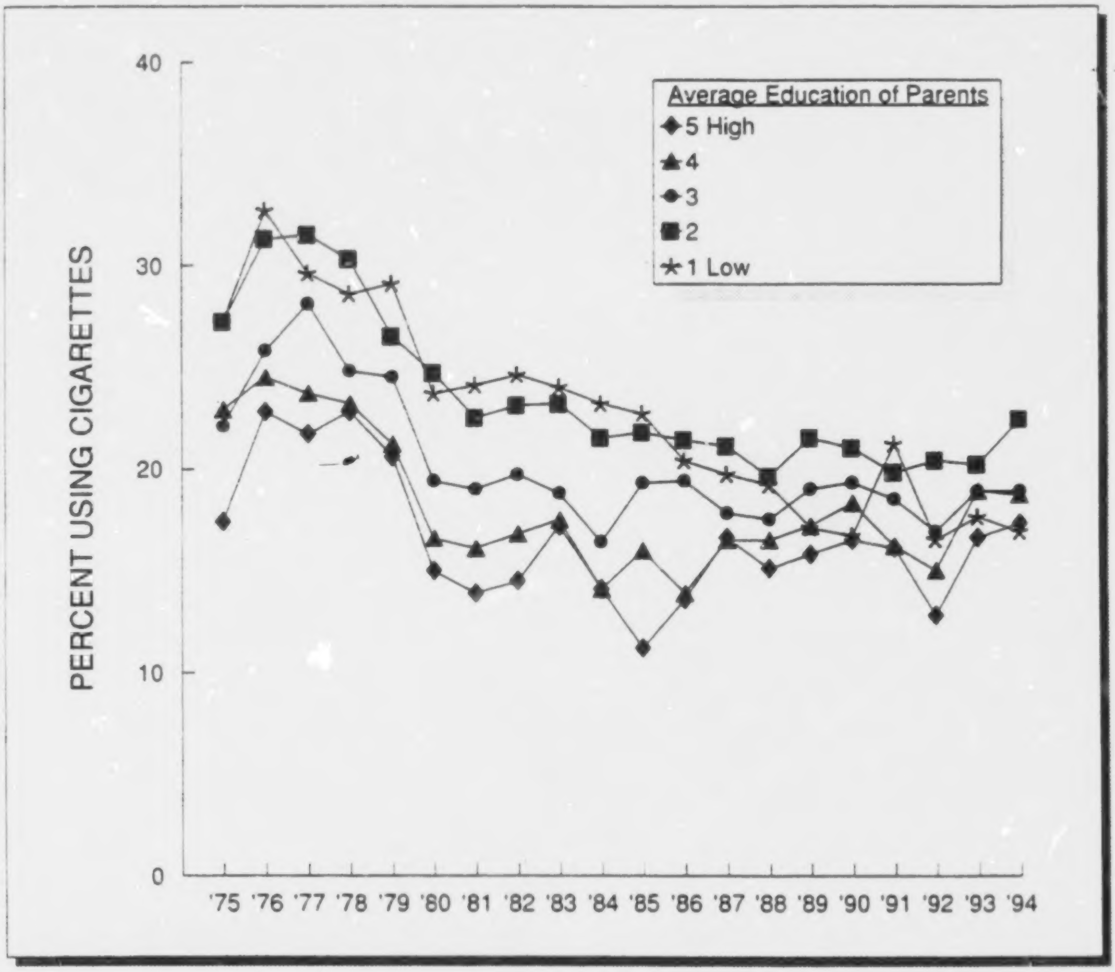


FIGURE 16f

Cigarettes: Trends in Daily Prevalence by Average Education of Parents for Twelfth Graders



groups, but in this case Hispanics have generally had the highest rates and blacks the lowest. Since 1992 overall cocaine use has been fairly stable, but there has been some upward migration in the use of crack among all groups in all three grades (except for Hispanics in twelfth grade, where use has been level). The use of ***cocaine other than crack*** has also begun to rise a bit, but particularly among Hispanic eighth and tenth graders.

- At the twelfth grade level, the rise in reported ***inhalant*** use (unadjusted for the underreporting of nitrites) occurred about equally among whites and Hispanics from 1975 through 1994, although Hispanics have consistently had a lower rate of use. Blacks, on the other hand, showed practically no increase in their already low levels of use. They now have an annual prevalence which is less than a third that of whites. A similar picture emerges in eighth and tenth grade, except that the increase among Hispanics and whites has been even steeper than the increases in twelfth grade.

- With regard to ***LSD*** and ***hallucinogens*** in general, blacks have consistently had far lower rates than whites or Hispanics (in twelfth grade only), and whites have consistently had the highest rates. Both whites and Hispanics have shown a consistent increase in LSD use since 1989 among seniors, and since 1992 among eighth and tenth graders.

- The decline in the use of ***stimulants,*** which began among high school seniors in 1982, was greatest among whites and least among blacks. This is because Hispanics started out in 1982 at considerably lower levels than whites, and blacks at much lower levels still. This decline reduced the differences among these three groups, even though all three groups have shown some decline. Since 1992 (or 1991 in the case of eighth and tenth graders), there has been some increase in stimulant use among all three ethnic groups.

- Use of ***barbiturates, methaqualone, tranquilizers***, and ***opiates other than heroin*** converged among seniors in these three racial/ethnic groups as use of these drugs has declined over a fairly long period. In general, whites consistently have had the highest usage rates in senior year, and also the largest declines; blacks have had the lowest rates, and therefore the smallest absolute declines. In the last few years though, there has been some upward trending in tranquilizer use among whites and Hispanics and in twelfth grade only for blacks, barbiturates, and opiates other than heroin.

- Most of the remaining illicit drugs have shown parallel trends for all three groups.

- Like most of the illicit drugs, the ***current daily alcohol*** rates are lowest for blacks (data not shown). They have hardly changed at all during the life of the study. Whites and Hispanics have daily usage rates now which are about equivalent, although whites had higher rates in the period 1977 through 1985.

  Among seniors there are large racial/ethnic differences in ***binge drinking*** (see Figure 17b) with blacks consistently having a rate below 20% (and now below 15%). In comparison, the rates for whites rose to a peak of around 45% in the early 1980s before declining to just over 30% a decade later. Hispanics have been in the middle, and also had a gradual decline in use during the 1980s. Hispanics showed some decline in use in the 1980's, but less than did whites. Among eighth and tenth grade students the three ethnic groups are moving pretty much in parallel.

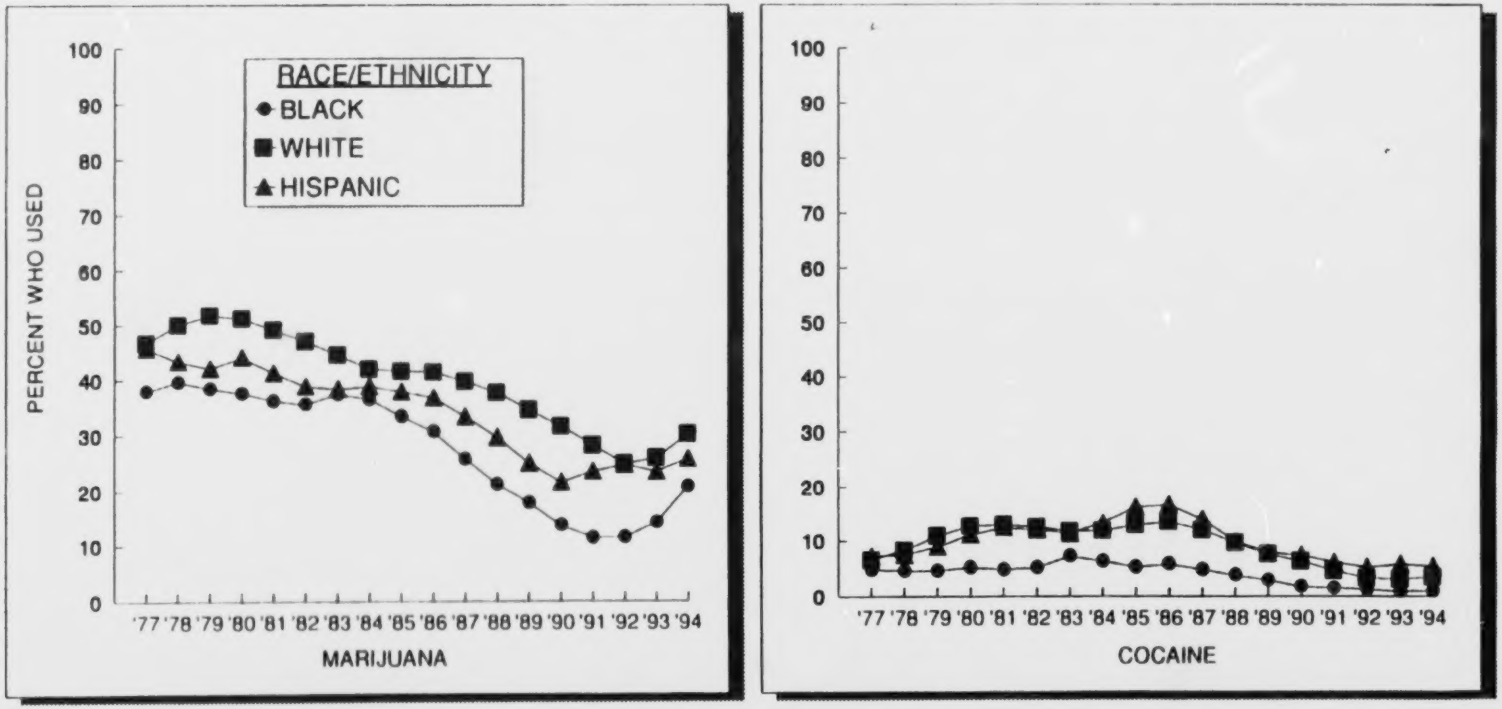
- ***Cigarette smoking*** shows differential trends that are quite interesting. All three groups had daily smoking rates that were not dramatically different in the late 1970s (Figure 17b). All three groups showed declines between 1977 and 1981, with the declines somewhat stronger for blacks and Hispanics, leaving whites with the highest smoking rates in 1981. Since then, blacks have shown a consistent and continuing decline, and now have a rate of daily smoking that is less than one-fourth that of whites, whose smoking rates changed hardly at all between 1981 and 1992. Since 1991 current (30-day) smoking is up among all three ethnic groups in all three grades (except among twelfth grade Hispanics, whose use has been fairly flat).

FIGURE 17a

Trends in Annual Prevalence of Marijuana and Cocaine Use for Twelfth Graders

by Race/Ethnicity

(Two-year moving average*)



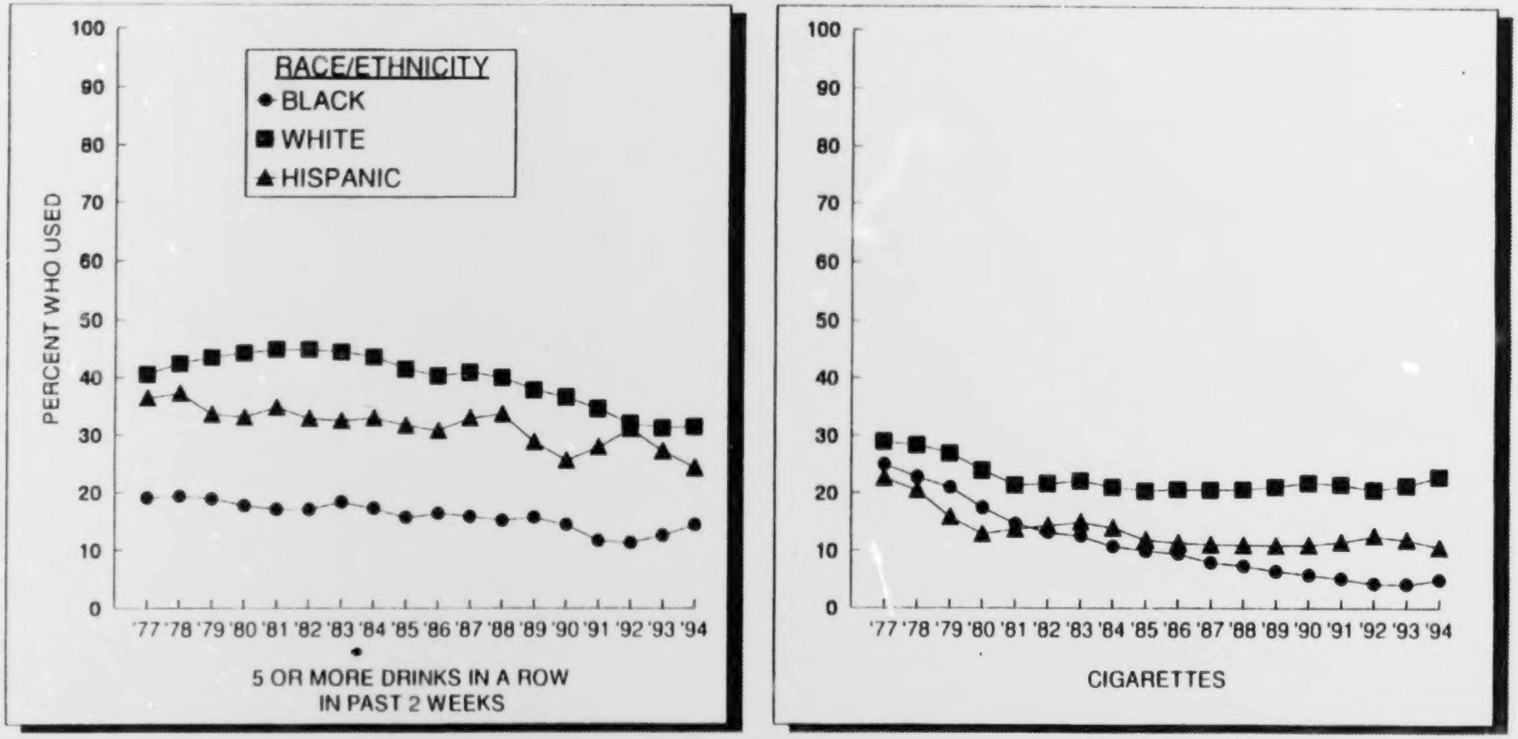
*Each point plotted here is the mean of the specified year and the previous year.

FIGURE 17b

Trends in Prevalence of 5 or More Drinks in a Row in the Past 2 Weeks and Daily Use of Cigarettes for Twelfth Graders

by Race/Ethnicity

(Two-year moving average*)



*Each point plotted here is the mean of the specified year and the previous year.

Chapter 6

USE AT EARLIER GRADE LEVELS

Knowing the age at which young people begin to use various drugs is important, in part because it provides a guide to the timing and nature of interventions in the school, the home, and the larger society. Any such intervention is likely to be considerably less effective in preventing drug use if it is administered after the ages of peak initiation. It also may be less effective if it substantially precedes this decision-making period. Not all drugs are begun at the same age; rather, a certain progression tends to occur, beginning with the drugs which are seen as least risky, deviant, or illegal, and progressing toward those that are more so.

Age of initiation has been ascertained from seniors by a set of questions which have been included in the study since its inception in 1975. The results have been used in this series of monographs to give a retrospective view of trends in lifetime prevalence at earlier grade levels. Because of the long time period these trends span, we continue to include here the series of figures based on seniors' responses, even though we now measure drug usage rates directly from eighth and tenth graders.

One would not necessarily expect today's eighth, tenth, and twelfth graders to give the same retrospective prevalence rate for a drug (say by sixth grade), since there are a number of differences among them. These differences can be summarized as follows:

(1) The lower grades contain the eventual school dropouts, while twelfth grade does not. The lower grades also have lower absentee rates. For any given year both factors should cause the prevalence rates derived directly from eighth graders to be higher than the retrospective prevalence rates for eighth grade derived from tenth graders (two years later) or twelfth graders (four years later).

(2) Each class cohort was in eighth grade in a different year, so any broad secular or historical trend in the use of a drug could contribute to differences in their reports of eighth grade experiences.

(3) The eighth, tenth, and twelfth graders are in three different class cohorts, so any lasting differences among cohorts could contribute to a difference at any grade level, including eighth grade.

There are also two types of method artifacts which could explain observed differences in the retrospective reports of use by eighth, tenth, and twelfth graders:

(4) Memory errors are more likely for the older respondents. They may forget that an event occurred (but this is unlikely for use of drugs), or they may not accurately remember when an event occurred. For example, an event may be remembered as having occurred more recently than it actually did.

(5) The definition of the eligible event may change as a respondent gets older. Thus, an older student may be less likely to include an occasion of taking a sip from someone's beer as an occasion of alcohol use, or an older student may be more likely to exclude

(appropriately) an over-the-counter stimulant when reporting amphetamine use. While we attempt to ask the questions as clearly as possible, some of these drug definitions are fairly subtle, and are likely to be more difficult for the younger respondents.

INCIDENCE OF USE BY GRADE LEVEL

Tables 18a through 18c give the retrospective initiation as reported by eighth, tenth, and twelfth graders, respectively. Obviously, the older students have a longer age span over which they can report initiation. Table 18d puts together the retrospective initiation rates from all three sets of respondents in order to facilitate a comparison of reported initiation rates by particular grades.

- Eighth, tenth, and twelfth grade students all report very low usage rates (1% or below) by the end of sixth grade for ***LSD*** and ***heroin***. Fewer than 2% reported any use of ***hallucinogens, cocaine***, or ***tranquilizers*** and 4% or less reported any use of ***stimulants***. ***Marijuana*** was tried by no more than 4.6% of youngsters by the end of sixth grade. These findings are consistent with past reports based on the retrospective data from twelfth graders, providing greater confidence in those retrospective reports.

- Of the illicit drugs, only ***inhalants*** show very large differences by age of reporting. While only 2.7% of the twelfth graders report having used inhalants by the end of sixth grade, a much higher 10.5% of the eighth graders report such use by sixth grade. Although any of the explanations offered above might explain these differences, we believe that early inhalant use may be associated with dropping out, and also that the use of the types of inhalants generally used at younger ages (glues, aerosols, butane) has been on the rise (i.e., that there has been a secular trend in use).

- ***Alcohol*** use by the end of sixth grade is retrospectively reported by 30% of the 1994 eighth graders, but by only 10% of the 1994 twelfth graders. Several factors probably contribute to the difference. One is a secular trend in which initiation of alcohol use appears to be occurring earlier (see Figure 18s). A second is that eventual dropouts are probably much more likely than average to drink at an early age. Still another is related to the issue of what is meant by "first use." The questions for all grades refer specifically to the first use of "an alcoholic beverage–more than just a few sips," but it is likely that the older students (twelfth graders) are more inclined to report only use that is not adult-approved, and not to count having less than a glass with parents or for religious purposes. Younger students (eighth graders) are less likely to have had a full drink or more, and may be more likely to report first use of a limited amount. Thus, the eighth grade data probably exaggerate considerably the phenomenon of having more than a few sips, whereas the twelfth grade data may understate it. Note that the data from the three groups of respondents tend to converge as we ask about lifetime alcohol use by the time they reach higher grade levels.

- A fair number from all three grade levels indicate having ***gotten drunk*** by the end of sixth grade (between 4% and 8%), and much of the difference may be attributable to the differential inclusion of eventual dropouts.

- Considerably larger proportions indicate having had their first ***cigarette*** by the end of sixth grade (from 17% to 29%). Again, because educational attainment is very highly correlated with smoking, the differential inclusion of eventual dropouts could account for most of the difference.

- Clearly the legal drugs are the most likely to be initiated at an early age, with ***inhalants*** and ***marijuana*** likely to come next.

- Judging by the data from eighth graders (Table 18a), the peak ages for initiation of ***cigarette*** smoking appear to be in the sixth and seventh grades (23%)--or between ages 11 and 12--but with a considerable number initiating smoking even earlier. In fact, 18% of the 1994 eighth grade respondents reported having their first cigarette by fifth grade. ***Daily smoking*** appears to develop primarily in grades eight through eleven.

- ***Smokeless tobacco*** use also tends to be initiated quite early, as Tables 18a, 18b, and 18c illustrate.

- For ***alcohol***, we are more inclined to rely on the data from seniors, which suggest that the peak ages of initiation are in seventh through ninth grade. The first occasion of ***drunkenness*** is most likely to occur in grades 7 through 10. Still, some 8% of 1994 eighth graders reported having been drunk by the end of sixth grade.

- ***Inhalant*** use tends to occur early, with peak initiation rates in grades 6 through 9. Among eighth graders in 1994, some 7% had already tried inhalants prior to sixth grade.

- For ***marijuana*** the highest initiation rates are seen in grades 9 through 11, though by eighth grade 17% of the 1994 eighth graders reported having already tried marijuana.

TABLE 18a

Incidence of Use for Various Types of Drugs, by Grade
Eighth Graders, 1994

(Entries are percentages)

Grade in which drug was first used	Marijuana	Inhalants	Hallucinogens	LSD	Cocaine	Crack	Coke Powder	Heroin	Stimulants	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[a]	Smokeless Tobacco	Steroids
4th	1.1	4.1	0.3	0.1	0.3	0.2	0.2	0.2	0.6	0.3	8.9	1.6	9.5	0.7	4.0	0.2
5th	1.1	2.4	0.4	0.3	0.3	0.2	0.2	0.2	0.8	0.3	8.1	2.0	8.1	1.1	2.1	0.2
6th	2.4	4.0	0.8	0.6	0.6	0.4	0.5	0.3	2.1	0.7	12.5	4.6	11.3	2.6	4.4	0.3
7th	5.8	5.4	1.4	1.3	1.3	0.9	1.1	0.8	4.4	1.6	16.7	9.7	11.7	4.1	5.9	0.7
8th	6.4	4.0	1.5	1.4	1.1	0.7	1.0	0.6	4.4	1.7	9.6	8.1	5.5	3.4	3.6	0.7
Never used	83.3	80.1	95.7	96.3	96.4	97.6	97.0	98.0	87.7	95.4	44.2	74.1	53.9	88.2	80.1	98.0

NOTES All drugs were asked about in both questionnaire forms except for the following: hallucinogens, LSD, heroin, stimulants, tranquilizers, and smokeless tobacco, which were in one form only. The approximate N for both forms was 15,300

SOURCE The Monitoring the Future Study, the University of Michigan.

[a]Data based on the percent of regular smokers (ever).

TABLE 18b

Incidence of Use for Various Types of Drugs, by Grade Tenth Graders, 1994

(Entries are percentages)

Grade in which drug was first used	Marijuana	Inhalants	Hallucinogens	LSD	Cocaine	Crack	Coke Powder	Heroin	Stimulants	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[a]	Smokeless Tobacco	Steroids
4th	0.7	2.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	6.0	1.3	8.0	0.5	3.7	0.1
5th	0.6	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	3.6	1.1	7.0	0.7	2.1	0.0
6th	1.3	2.1	0.2	0.2	0.2	0.1	0.1	0.1	0.8	0.2	7.1	3.0	8.5	1.7	3.1	0.1
7th	2.9	3.0	0.8	0.6	0.5	0.3	0.4	0.2	2.1	0.7	12.3	6.6	10.5	3.2	4.0	0.2
8th	5.4	3.6	1.6	1.3	0.7	0.3	0.7	0.3	3.2	1.4	17.7	11.2	10.3	4.1	5.7	0.3
9th	11.1	3.4	3.1	2.8	1.5	0.7	1.3	0.5	5.4	1.7	18.1	15.9	9.1	5.4	7.0	0.7
10th	8.3	2.1	2.2	2.1	1.2	0.6	1.1	0.4	3.2	1.2	6.4	8.1	3.4	3.3	3.6	0.5
Never used	69.6	82.0	91.9	92.8	95.7	97.9	96.2	98.5	84.9	94.6	28.9	52.8	43.1	81.1	70.8	98.2

NOTES: All drugs were asked about in both questionnaire forms except for the following: hallucinogens, LSD, heroin, stimulants, tranquilizers, and smokeless tobacco, which were in one form only. The approximate N for both forms was 14,700.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on percent of regular smokers (ever).

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TABLE 18c

Incidence of Use for Various Types of Drugs, by Grade
Twelfth Graders, 1994

(Entries are percentages)

Grade in which drug was first used	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Crack	Other Forms of Cocaine	Heroin	Other Opiates	Stimulants[b]	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[c]	Smokeless Tobacco	Steroids
6th	1.8	2.7	0.0	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.5	0.7	0.5	0.2	0.4	9.9	3.5	17.3	1.9	7.3	0.1
7-8th	6.4	5.1	0.5	1.3	1.2	0.5	0.8	0.2	0.8	0.3	0.9	2.1	1.6	0.4	0.9	21.2	13.9	19.5	5.6	6.9	0.6
9th	6.4	3.0	0.3	2.2	2.0	0.3	0.8	0.2	0.6	0.2	0.9	3.2	1.4	0.2	1.1	19.5	15.9	9.0	4.8	5.5	0.3
10th	8.3	3.2	0.3	2.8	2.8	0.4	1.2	0.6	1.0	0.3	1.2	3.5	1.1	0.2	1.5	13.6	13.0	7.1	4.4	4.1	0.6
11th	8.6	2.4	0.3	2.7	2.5	0.9	1.6	0.9	1.6	0.2	1.7	3.5	1.6	0.2	1.7	10.5	10.5	6.0	3.8	4.2	0.4
12th	6.7	1.3	0.2	2.0	1.8	0.3	1.3	0.8	0.9	0.1	1.4	2.8	0.9	0.1	0.9	5.6	6.0	3.1	2.0	2.8	0.4
Never used	61.8	82.3	98.3	88.6	89.5	97.2	94.1	97.0	94.8	98.8	93.4	84.3	93.0	98.6	93.4	19.6	37.1	38.0	77.4	69.3	97.6

NOTES: Percentages are based on three of the six forms (N = approximately 6,900) except for cocaine and crack, which are based on four of the six forms (N = approximately 9,200), inhalants, other forms of cocaine, smokeless tobacco and steroids, which are based on two of the six forms (N = approximately 4,600), and PCP and nitrites, which are based on one of the six forms (N = approximately 2,300).

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[c] Data based on percent of regular smokers (ever).

TABLE 18d

Incidence of Use for Various Types of Drugs: A Comparison of Responses from Eighth, Tenth, and Twelfth Graders, 1994

(Entries are percentages)

Grade level of respondents	Marijuana	Inhalants[a]	Hallucinogens[a]	LSD	Cocaine	Heroin	Stimulants[b]	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[c]
	Percent who used by end of 6th grade											
8th	4.6	10.5	1.5	1.0	1.2	0.7	3.5	1.3	29.5	8.2	28.9	4.4
10th	2.6	5.8	0.4	0.3	0.3	0.2	1.2	0.4	16.7	5.4	23.5	2.9
12th	1.8	2.7	0.3	0.2	0.2	0.1	0.7	0.4	9.9	3.5	17.3	1.9
	Percent who used by end of 8th grade											
8th	16.7	19.9	4.3	3.7	3.6	2.0	12.3	4.6	55.8	25.9	46.1	11.8
10th	10.9	12.4	2.8	2.2	1.5	0.7	6.5	2.5	46.7	23.2	44.3	10.2
12th	8.2	7.8	1.6	1.4	1.0	0.4	2.8	1.3	31.1	17.4	36.8	7.5
	Percent who used by end of 10th grade											
10th	30.4	18.0	8.1	7.2	4.3	1.5	15.1	5.4	71.1	47.2	56.9	18.9
12th	22.9	14.0	6.6	6.2	3.0	0.9	9.5	3.9	64.2	46.3	52.9	16.7

SOURCE: The Monitoring the Future Study, the University of Michigan.
NOTES: 8th and 10th graders: All drugs were asked about in both questionnaire forms except for the following: hallucinogens, LSD, heroin, stimulants, tranquilizers, and smokeless tobacco, which were in one form only. The approximate N for both forms for 8th graders was 15,300 and for 10th graders was 14,700. 12th graders: Percentages are based on three of the six forms (N = approximately 6,900) except for cocaine and crack, which are based on four of the six forms (N = approximately 9,200), inhalants, other forms of cocaine, smokeless tobacco and steroids, which are based on two of six questionnaire forms (N = approximately 4,600), and PCP and nitrites, which are based on one of six questionnaire forms (N = approximately 2,300).

[a] Unadjusted for underreporting of certain drugs. See text for details.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[c] Data based on percent of regular smokers (ever).

- The illicit drugs other than marijuana and inhalants do not reach peak initiation rates until the high school years (grades 10 through 12), consistent with the progression model noted earlier.

- For most illicit drugs, half to two-thirds of those who have used by twelfth grade say they initiated use prior to grade 10; this is true for ***inhalants*** (61%), ***methaqualone*** (57%), ***barbiturates*** (50%), and ***heroin*** (50%). The other illicit drugs have somewhat later initiation rates, with less than one-half of those who use by twelfth grade reporting use prior to grade 10: these include ***nitrites*** (47%), ***steroids*** (42%), ***PCP*** (39%), ***marijuana*** and ***amphetamines*** (38%), ***tranquilizers*** (36%), ***opiates other than heroin*** (35%), ***hallucinogens*** (33%), ***LSD*** (32%), ***cocaine*** and ***other forms of cocaine*** (31%), and ***crack*** (20%).

TRENDS IN USE AT EARLIER GRADE LEVELS

Using the retrospective data provided by members of each senior class concerning their grade at first use, it has been possible to reconstruct lifetime prevalence trend curves for lower grade levels over many earlier years. Obviously, data from school dropouts are not included in any of the curves. Figures 18a through 18y show the reconstructed lifetime prevalence curves for earlier grade levels for a number of drugs.

- Figure 18a provides the trends at each grade level for lifetime use of ***any illicit drug***. It shows that for all grade levels there was a continuous increase in illicit drug involvement through the 1970s. Fortunately, the increase for use prior to seventh grade was quite small; only 1.1% of the class of 1975 reported having used an illicit drug in sixth grade or below (which was in 1969 for that class), but the figure has increased modestly, and for the graduating class of 1994 is 2.7% (which was in 1988 for that class). The lines for the other grade levels all show much steeper upward slopes. For example, about 37% of the class of 1975 had used some illicit drug by the end of grade 10, compared to 52% of the class of 1982. This statistic has now fallen back to 28% for the class of 1994.

- Beginning in 1980 there was a leveling off at the high school level (grades 10, 11, and 12) in the proportion becoming involved in illicit drugs. The leveling in the lower grades came about a year earlier. All grades then showed a decline in use throughout the 1980s and into the early 1990s. After 1991 or 1992, lifetime rates began to rise again.

- Most of the early increase in any illicit drug use was due to increasing proportions using marijuana. We know this from the results in Figure 18b showing trends for each grade level in the proportion having used ***any illicit drug other than marijuana*** in their lifetime. Compared to Figure 18d for marijuana use, these trend lines are relatively flat throughout the 1970s and, if anything, began to taper off among ninth and tenth graders between 1975 and 1977. The biggest cause of the increases in these curves from 1978 to 1981 was the rise in reports of amphetamine use. As noted earlier, we suspect that at least some of this rise was artifactual. If amphetamine use is removed from the calculations, even greater stability is shown in the proportion using ***illicit drugs other than marijuana*** or ***amphetamines***. (See Figure 18c.)

- As can be seen in Figure 18d, for the years covered across the decade of the 1970s, ***marijuana*** use rose steadily at all grade levels down through the seventh and eighth grades. Beginning in 1980, lifetime prevalence for marijuana began to decline for grades 9 through 12. Declines in grades 7-8 began a year later, in 1981.

  There was also some small increase in marijuana use during the 1970s at the elementary level, below seventh grade. Use by sixth grade or lower rose gradually from 0.6% for the class of 1975 (who were sixth graders in 1968-69) to a peak of 4.3% in the class of 1984 (who were sixth graders in 1977-78). Use began dropping thereafter and for the class of 1994 (who were sixth graders in 1990) was down to 1.8%. (The more up-to-date data from the 1994 eighth graders, which are not exactly comparable because of the inclusion of eventual dropouts, yield a prevalence estimate of 4.6% for these students when they were sixth graders in 1992.)

  The more recent upturn in the use of any illicit drug index (Figure 18a) is also due to a sharp increase in marijuana use (Figure 18d), although the proportions using any illicit drug other than marijuana (Figure 18b) has begun to rise modestly.

- Questions about age at first use for ***inhalants*** (unadjusted for the nitrites) were introduced in 1978. The retrospective trend curves (Figure 18e) suggest that during the mid-1970s, experience with inhalants decreased slightly for most grade levels and then began to rise. For the upper grade levels there was a continued rise, peaking with the classes of 1989 and 1990. The class of 1992 showed lower rates of initiation than its two predecessor classes at all grade levels, but the class of 1993 showed a resumption of the upward trends, as did the class of 1994.

- Since grade-at-first-use data have been gathered for the ***nitrites*** beginning in 1979, only limited retrospective data exist (Figure 18f). These do not show the recent increase observed for the overall inhalant category. To the contrary, they show a substantial decline. Because their use level has gotten so low, their omission by some respondents from their reports of overall inhalant use has much less effect on the adjusted inhalants statistics in recent years than it did when nitrite use was more common.

- Lifetime prevalence of ***hallucinogen*** use (unadjusted for underreporting of PCP) began declining among students at most grade levels in the mid-1970s (Figure 18g), and this gradual decline continued through the mid-1980s, reaching low points at several grade levels for the class of 1986. Recent classes have shown some fluctuations, with an increase in initiation in the classes of 1993 and 1994 from grade nine onward.

- Trend curves for the specific hallucinogen, ***LSD*** (Figure 18h), are similar in shape (though at lower rates, of course). Incidence rates for ***psychedelics other than LSD*** (Figure 18i) declined from the mid-1970s through the late-1980s–particularly in the upper grades–before leveling. After 1991 use began to rise again in the grades for which data are available.

- There is less trend data for ***PCP***, since questions about grade of first use for this drug were not added until 1979. However, some interesting results emerge. A sharp downturn began around 1979 (see Figure 18j), and use declined in all grade levels until 1987; since then there has been little change.

- ***Cocaine*** use at earlier grade levels is given in Figure 18k. One clear contrast to the marijuana pattern is that more than half of initiation into cocaine use takes place in grades 10 through 12 (rather than earlier, as has been the case for marijuana in most years). Further, most of the increase in cocaine experience between 1976 and 1980 occurred in grades 11 and 12, not below. After 1980, experience with cocaine generally remained fairly level until after 1986, when use among eleventh and twelfth graders began to show a significant decline. (There seemed to be little or no decline in the lower grades.)

- Questions on age of first use for ***crack*** were first asked of the class of 1987. The retrospective data show crack initiation falling at all grade levels but the largest proportional declines occurred for grades 11 and 12 (see Figure 18l). More recently rates are level. However, ***powder cocaine*** clearly fell more sharply than crack (see Figure 18m), again mostly in grades 11 and 12. Rates have leveled since about 1991 or 1992.

- Though difficult to see in Figure 18n, the ***heroin*** lifetime prevalence figures for grades 9 through 12 all began declining in the mid-1970s, then leveled by 1979, and show no evidence of reversal yet.

- The lifetime prevalence of use of ***opiates other than heroin*** has remained relatively flat at all grade levels since the mid-1970s, with the class of 1991 showing the first evidence of decline when they reached the upper grades (Figure 18o). Since then, the rates have pretty much leveled again.

- The lifetime prevalence statistics for ***stimulants*** peaked briefly for grade levels 9 through 12 during the mid-1970s (see Figure 18p). However, they showed a sharp rise in the late 1970s at virtually all grade levels. As has been stated repeatedly, we believe that some, perhaps most, of this upturn was artifactual in the sense that nonprescription stimulants accounted for much of it. However, regardless of what accounted for it, there was a clear upward secular trend, that is, one observed across all cohorts and grade levels–beginning in 1979. The unadjusted data from the class of 1983 gives the first indication of a reversal of this trend. The adjusted data from the classes of 1982 through 1992 suggest that the use of stimulants leveled around 1982 and has fallen appreciably since in grades 9 through 12. There is less evidence of a decline in lifetime prevalence among seventh and eighth graders. The classes of 1993 and 1994 are showing an upturn in use in the upper grades; the recent surveys of eighth and tenth graders show that some upturn has occurred among them, as well.

- As the graphs for the two subclasses of sedatives—barbiturates and methaqualone—show, the trend lines have been quite different for them at earlier grade levels as well as in twelfth grade (see Figures 18q and 18r). Since about 1974 or 1975, lifetime prevalence of ***barbiturate*** use had fallen off sharply for the upper grade levels for all classes until the late 1970s; the lower grades showed some increase in the late 1970s (perhaps reflecting the advent of some look-alike drugs) and in the mid-1980s, all grades resumed the decline. In the late-1980s there was a leveling rates, followed by signs of an upturn by the mid-1990s.

  During the mid-1970s ***methaqualone*** use started to fall off at about the same time as barbiturate use in nearly all grade levels, but dropped rather little and then flattened. Between 1978 and 1981 there was a fair resurgence in use in all grade levels; but after 1982 there was a sharp decline to near zero.

- Lifetime prevalence of ***tranquilizer*** use (Figure 18s) also began to decline at all grade levels in the mid-1970s. It is noteworthy that, like sedatives, the overall decline in tranquilizer use has been considerably greater in the upper grade levels than the lower ones. Overall, it would appear that the tranquilizer trend lines have been following a similar course to those of barbiturates. So far, the curves are different only in that tranquilizer use continued a steady decline among eleventh and twelfth graders since 1977 (at least through the class of 1990), while the barbiturate use decline was interrupted for awhile in the early 1980s.

- The curves for lifetime prevalence of ***alcohol*** at grades 11 and 12 (Figure 18t) are very flat between the early 1970s and late 1980s, reflecting little change over more than a decade. More recent classes (1989-1993) showed slight declines, which ended with the class of 1994. At the seventh through tenth grade levels, the curves show slight upward slopes in the early 1970s, indicating that, compared to the earlier cohorts (prior to the class of 1978), more recent classes initiated use at earlier ages. There was an even sharper upward trending in the mid-1980s, particularly at the seventh through eighth grade level. Thus, while 27% of the class of 1975 first used alcohol in eighth grade or earlier, 36% in the class of 1993 had done so. Females accounted for most of the change; 42% of females in the class of 1975 first used alcohol prior to tenth grade, compared to 53% in the class of 1993. (Because all of the 1994 data are based on the revised questions about alcohol use, the 1994 data are not strictly comparable to the earlier trend data.)

  Beginning with the class of 1986, we added questions asking seniors when did they first "drink enough to feel drunk or very high". Figure 18u, which give these results for having been drunk, shows fairly similar curves to those for lifetime prevalence. Recent classes (1991-1993) have shown modest declines in this behavior at all grade levels above grade six, although the decline appears to end with the class of 1994.

- Beginning with the class of 1986, we added questions asking seniors "when did you smoke your first cigarette." Figure 18v shows that the ***cigarette smoking*** initiation rate was quite high by grade 6 (which was in 1980) for the class of 1986 (over 20%), and has fallen only slightly in subsequent classes (17% for the class of 1994, who were in grade 6 in 1988).

  Substantial additional initiation occurs in grades 7 and 8: Over 40% of the class of 1986 had smoked a cigarette by grade 8. This figure stands at 37% for the class of 1994. Initiation has declined very slightly for all grade levels in recent classes.

- Figure 18w presents the smoking measure contained in the study since its inception: lifetime prevalence of cigarette smoking on a daily basis. It shows that initiation to ***daily smoking*** was beginning to peak at the lower grade levels in the early to mid-1970s. This peaking did not become apparent among high school seniors until some years later. In essence, these changes reflect in large part cohort effects–changes which show up consistently across the age band for certain class cohorts. When differences in smoking at early ages are observed between cohorts, one would expect to see those differences endure, due to the highly addictive nature of nicotine. The classes of 1982 and 1983 showed some leveling of the previous decline, but the classes of 1984 through 1986 showed an encouraging resumption of the decline while they were in earlier grade levels. The data from the classes of 1987 and 1988 showed a pause in the decline; but the classes of 1989, 1990, and 1991 unfortunately showed a new *rise* in the lifetime prevalence of daily cigarette use as they passed through all grade levels. This rise is first discernible when these class cohorts were in eighth grade (between 1984 and 1987). The classes of 1993 and 1994 continued this rise after a brief pause in 1992. Also, the direct survey data from eighth and tenth graders show their current daily prevalence rates rising from 1991-1994.

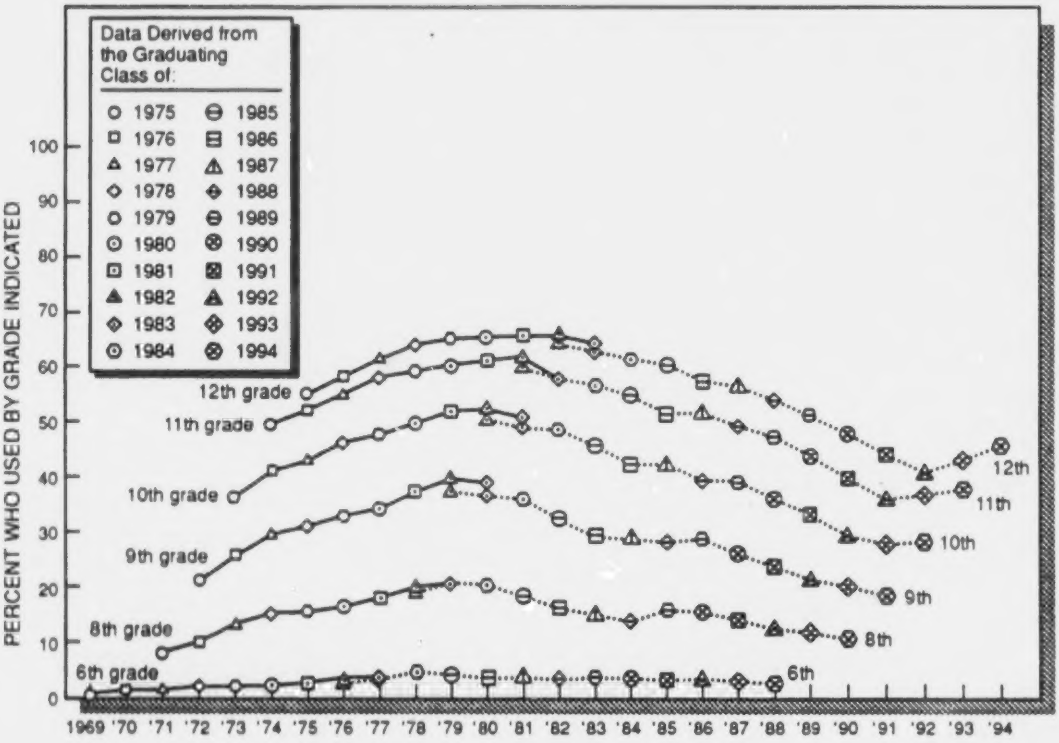
- ***Smokeless tobacco*** use (Figure 18x) was first asked of the class of 1986. Like cigarettes, it too has shown a cohort-linked pattern of change. Since the class of 1986 there was a rise and then a decline in use in all grades, with the class of 1990 showing peak levels of use at most grades. (In the upper grades, there was some decline preceding the peak class of 1990.) Since the class of 1990 there has been some decline at all grade levels. The lifetime prevalence rates reported from the eighth and tenth grade surveys show a continuing decline from 1991-1993 among eighth graders and from 1991-1992 among tenth graders, followed by a rise in use.

- ***Steroid*** use was first asked of the class of 1989. The classes of 1989 through 1991 showed about a one-third drop in rates at grade 9 and each higher grade (Figure 18y). Rates of initiation at all grade levels stabilized in 1992 and 1993, but rose very slightly in 1994. The direct surveys of eighth and tenth graders show no change since 1991 in their very low steroid initiation.

FIGURE 18a

Use of Any Illicit Drug: Trends in Lifetime Prevalence for Earlier Grade Levels

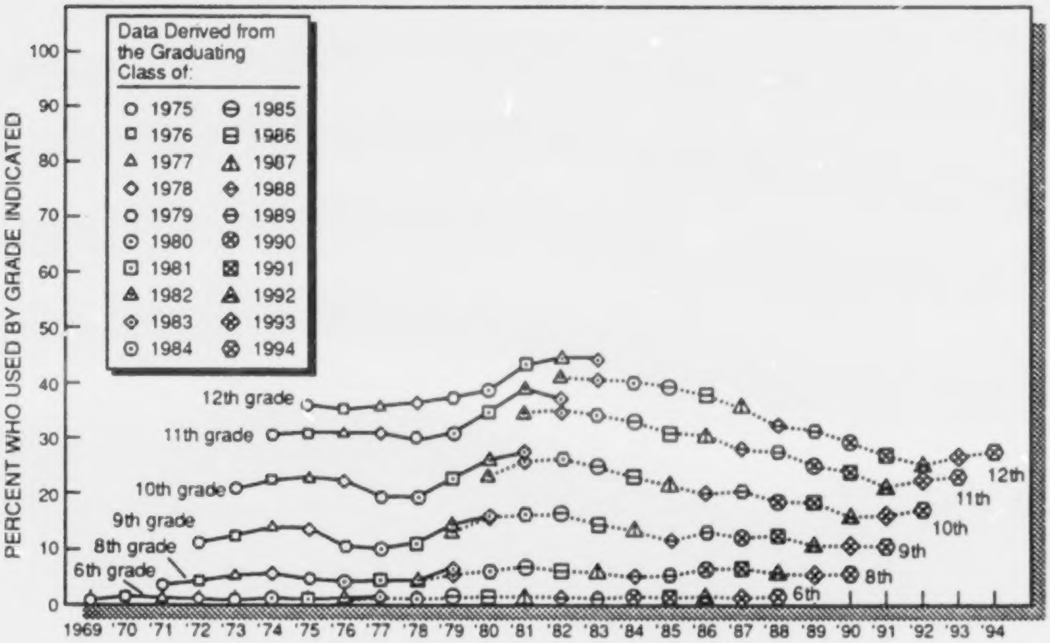
Based on Retrospective Reports from Twelfth Graders



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 18b

Use of Any Illicit Drug Other Than Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 18c

Use of Any Illicit Drug Other Than Marijuana or Amphetamines: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders

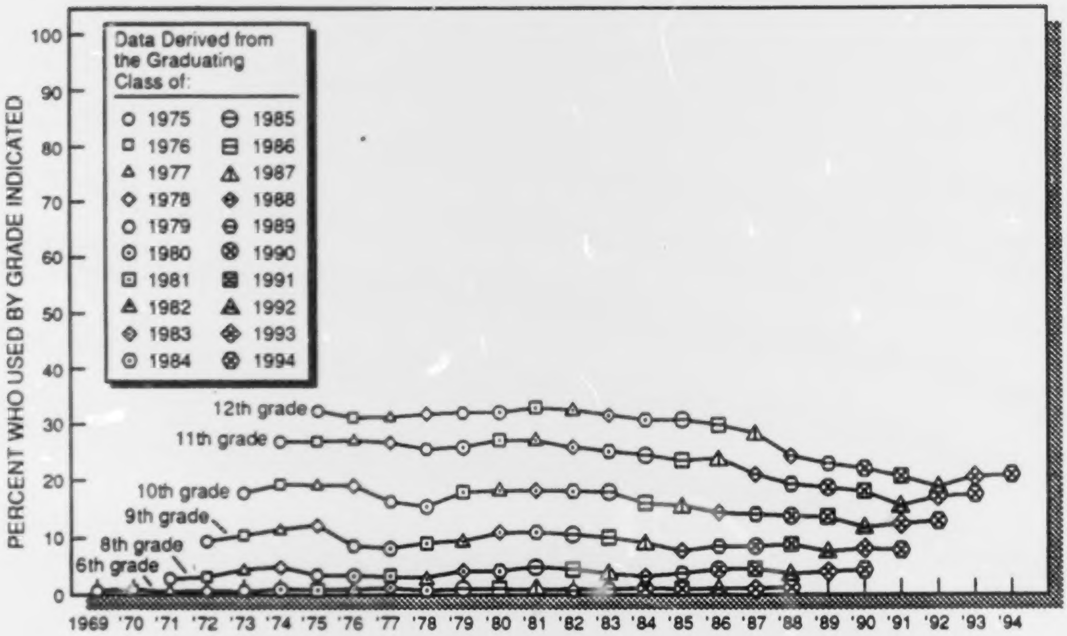


FIGURE 18d

Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

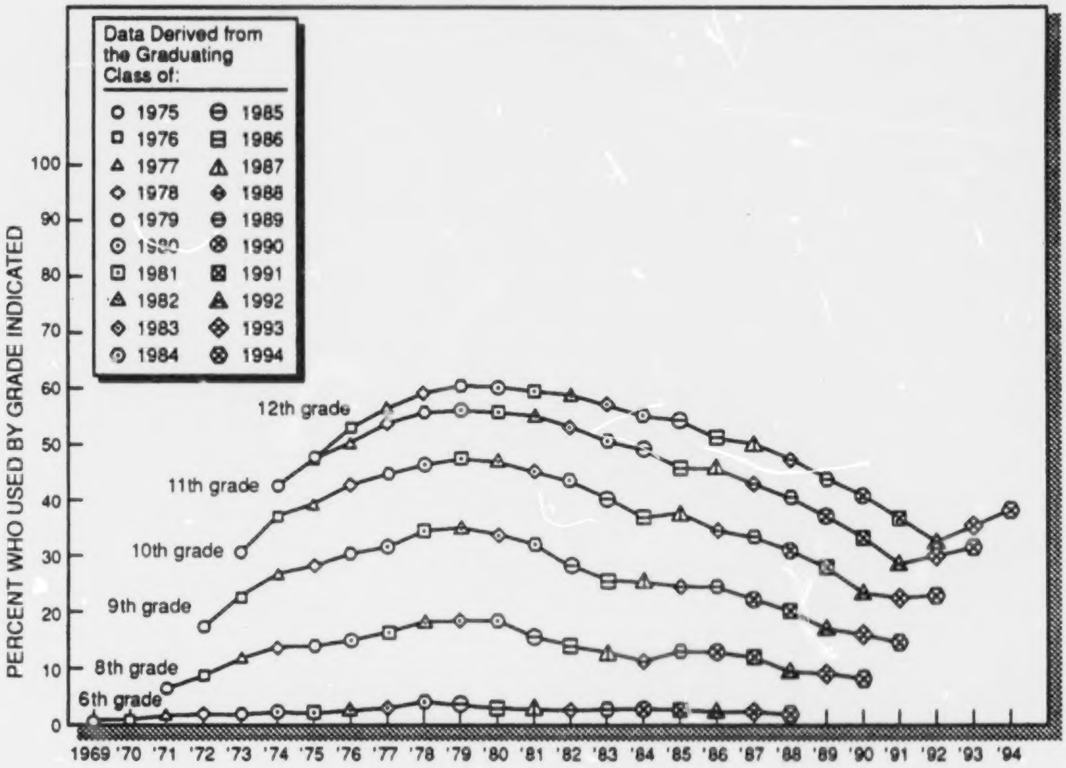


FIGURE 18e

Inhalants: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

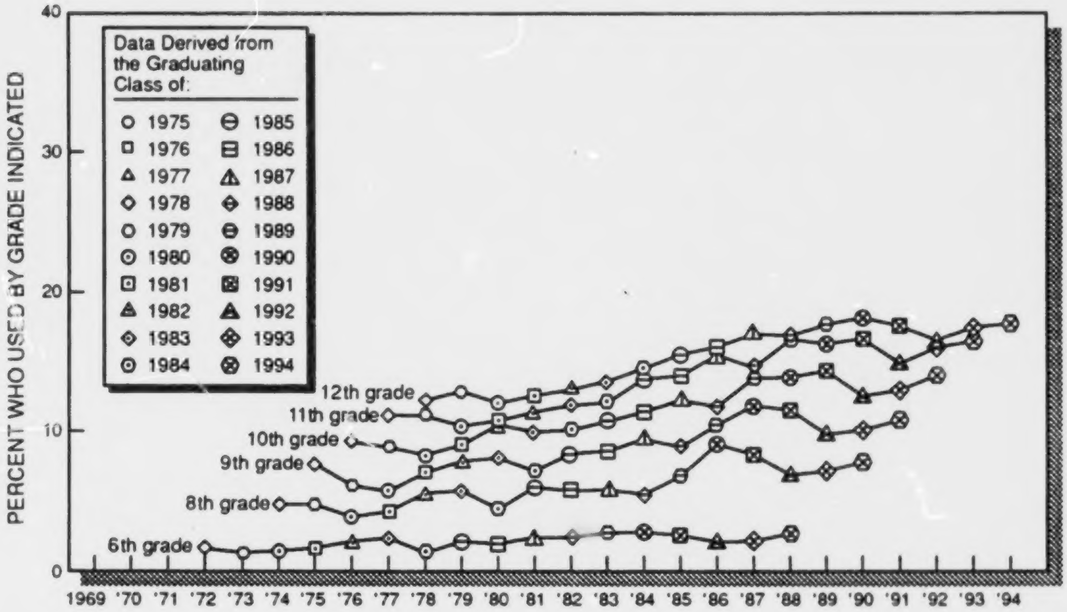


FIGURE 18f

Nitrites: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

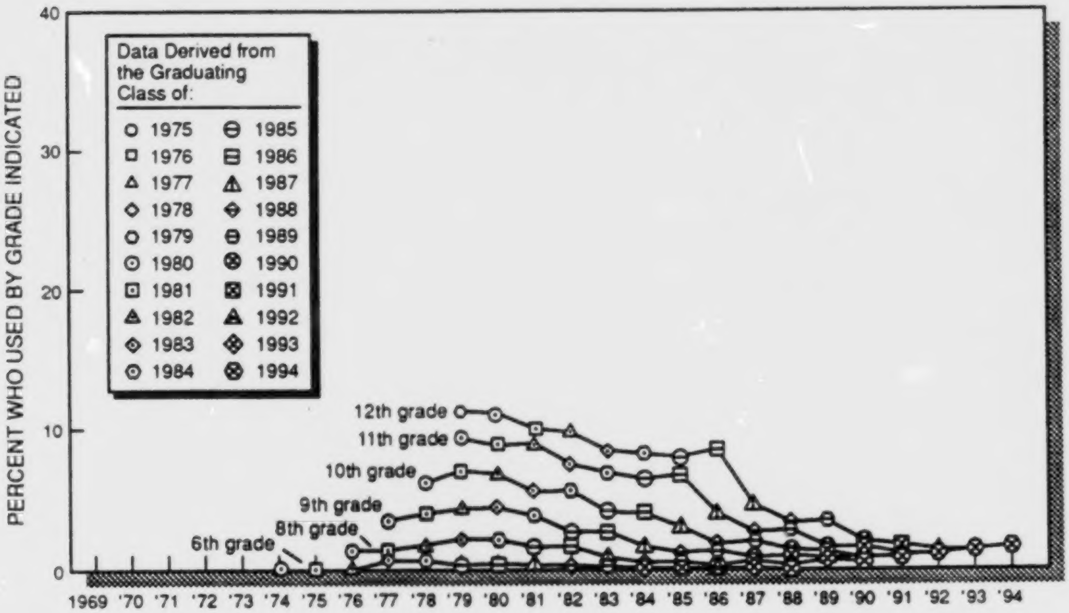
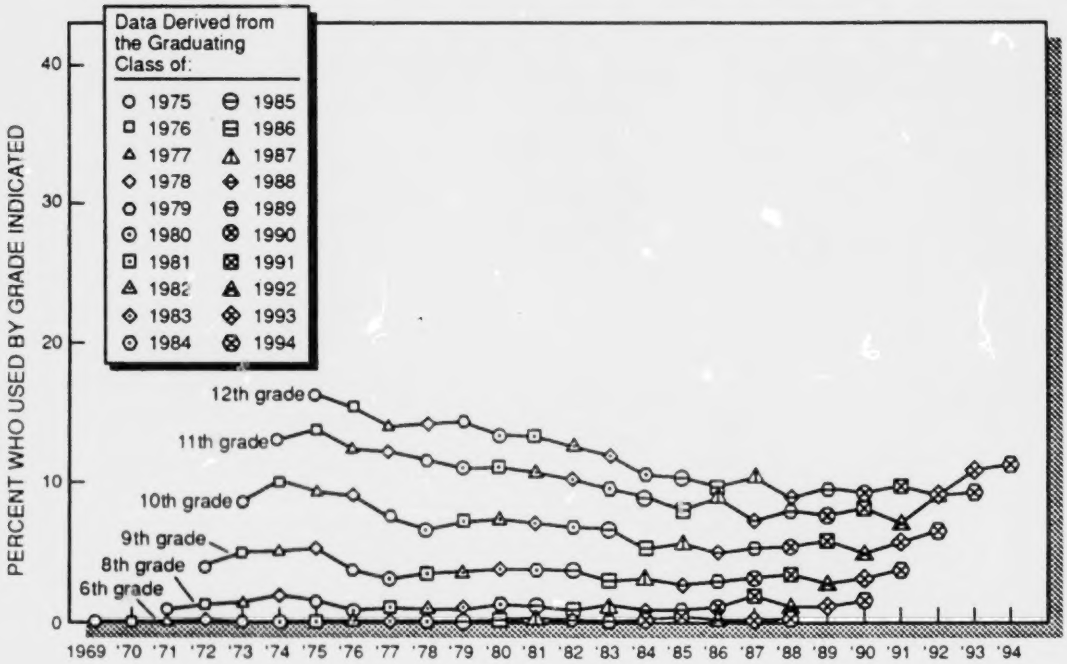


FIGURE 18g

Hallucinogens: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders



NOTE: Hallucinogens **unadjusted** for any underreporting of PCP are graphed here.

FIGURE 18h

LSD: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

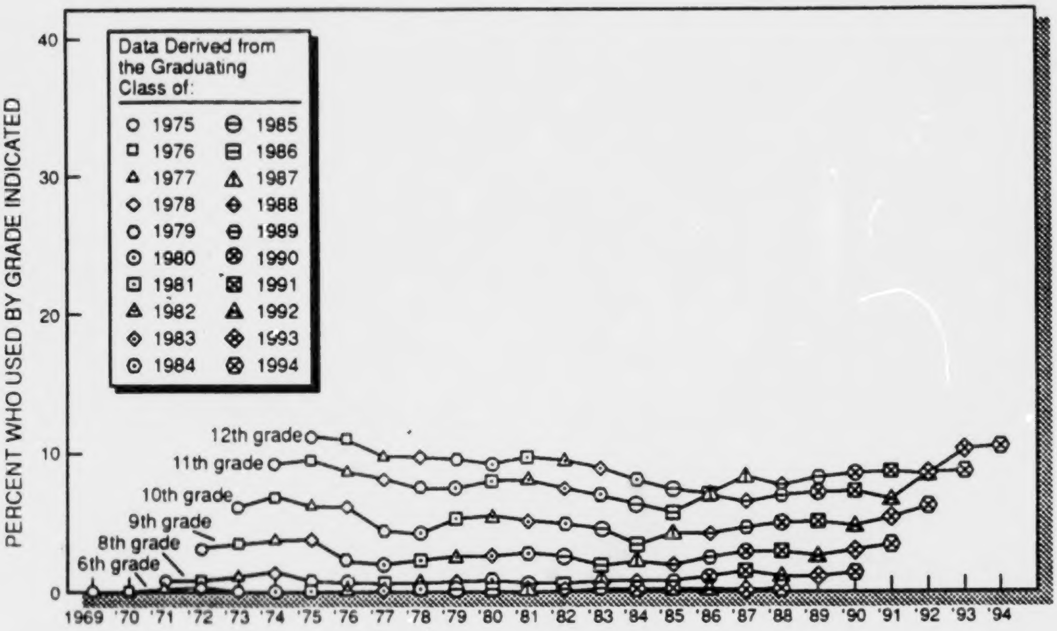


FIGURE 18i

Hallucinogens Other Than LSD: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders

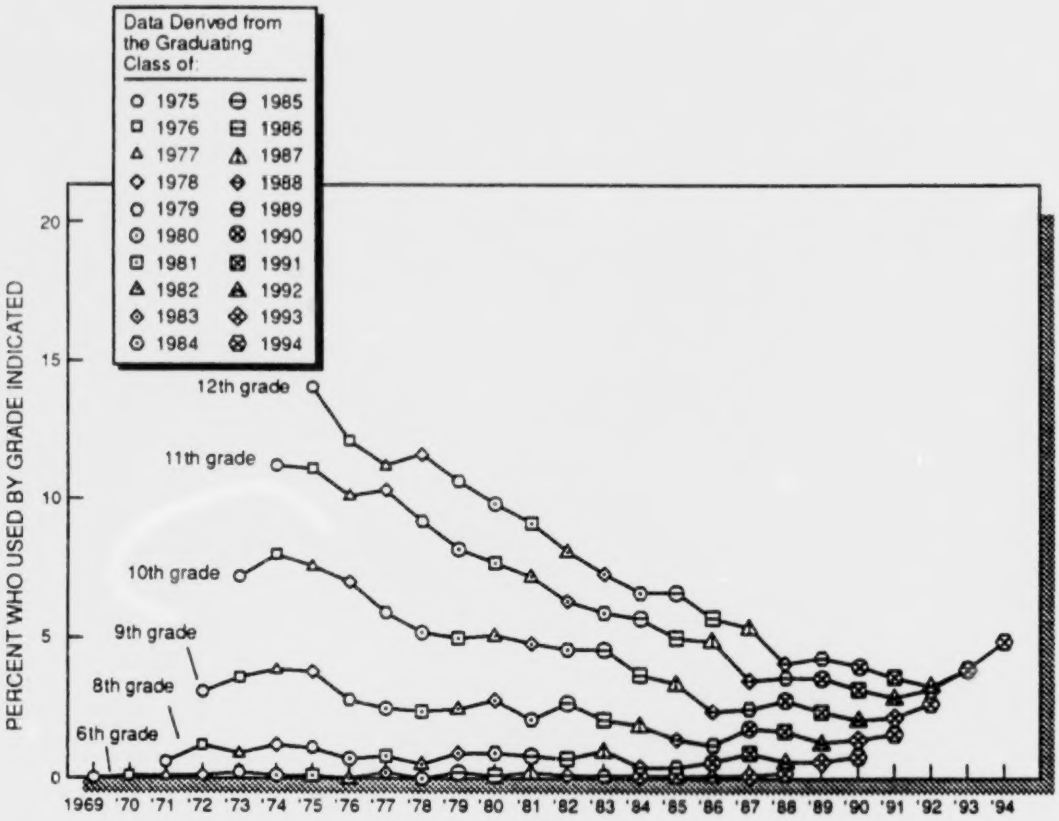


FIGURE 18j

PCP: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

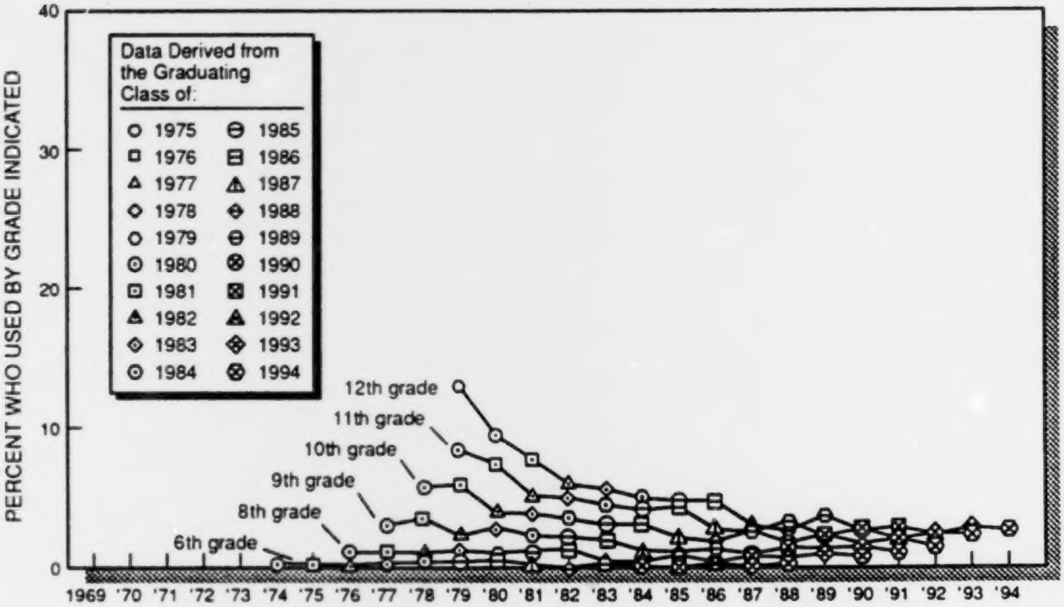


FIGURE 18k

Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

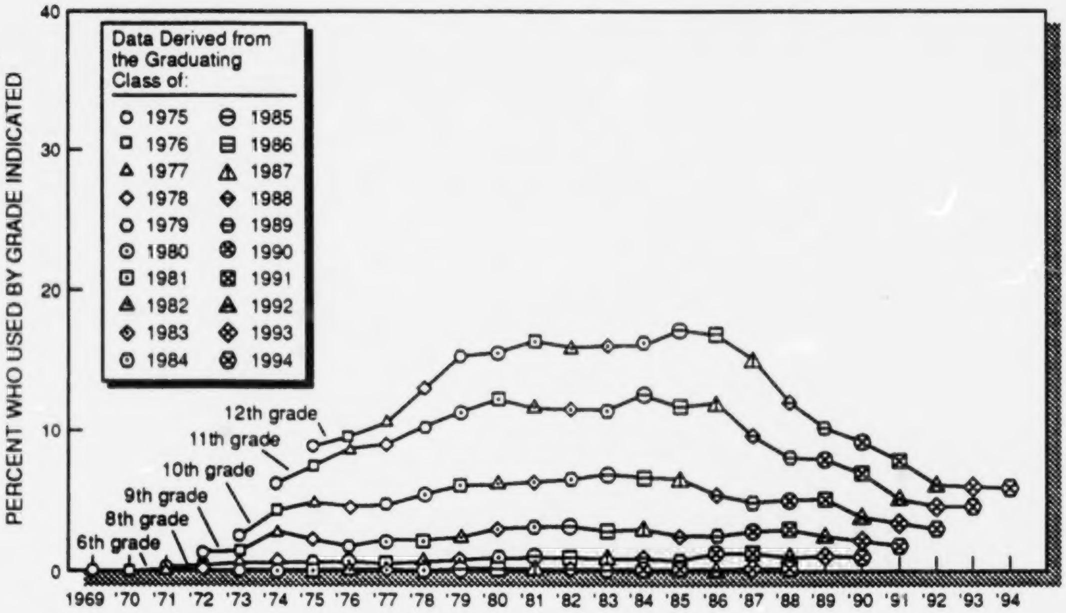


FIGURE 181

Crack Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

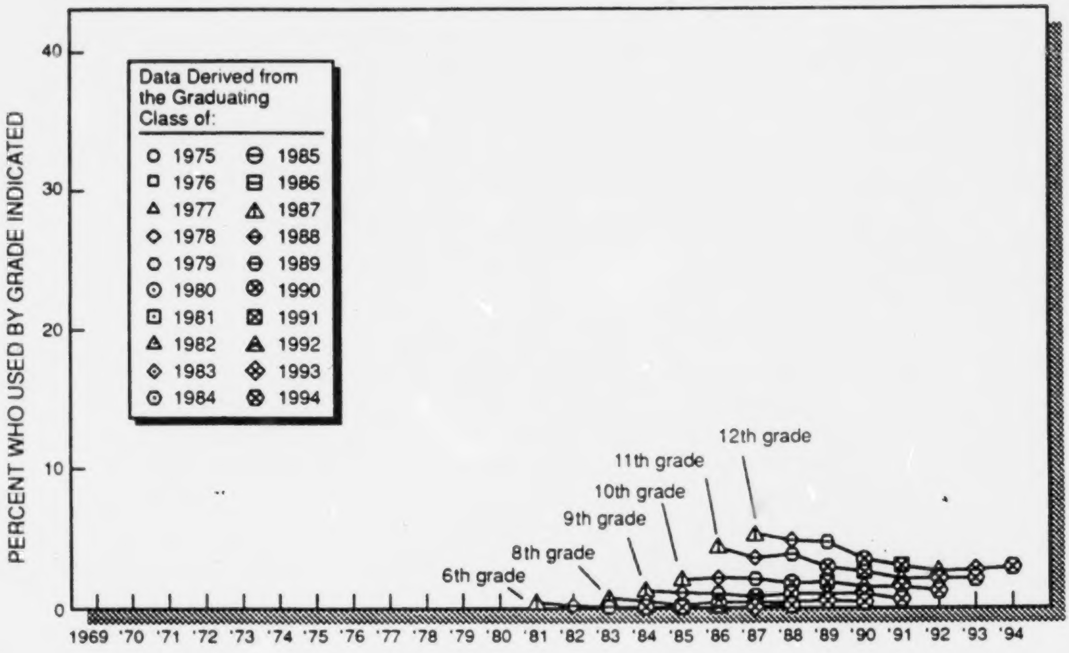


FIGURE 18m

Other Forms of Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

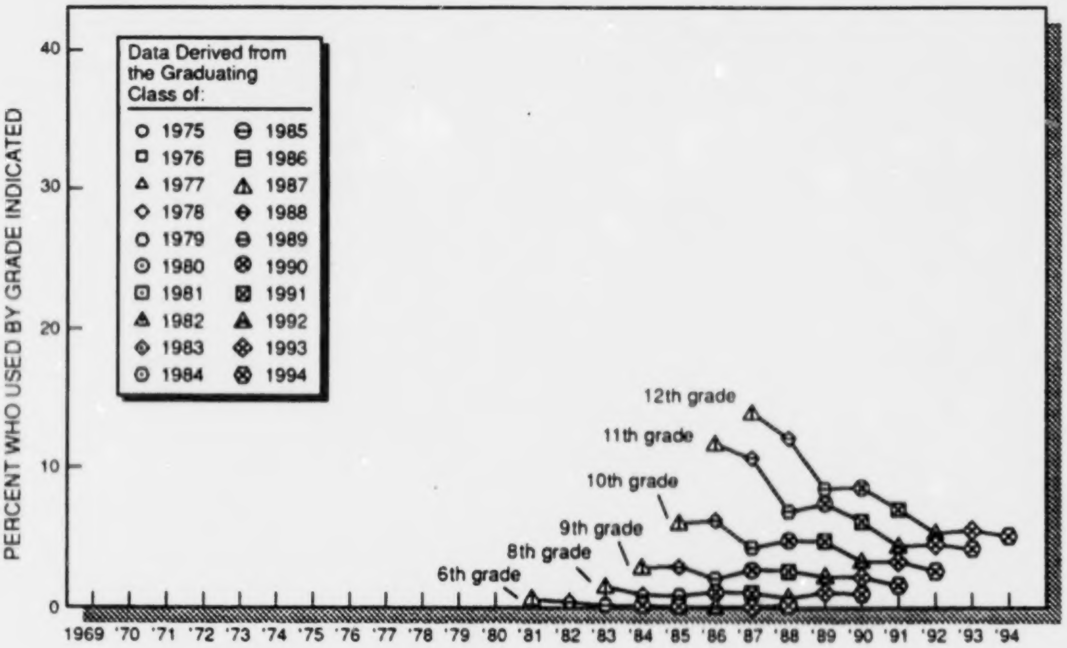


FIGURE 18n

Heroin: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

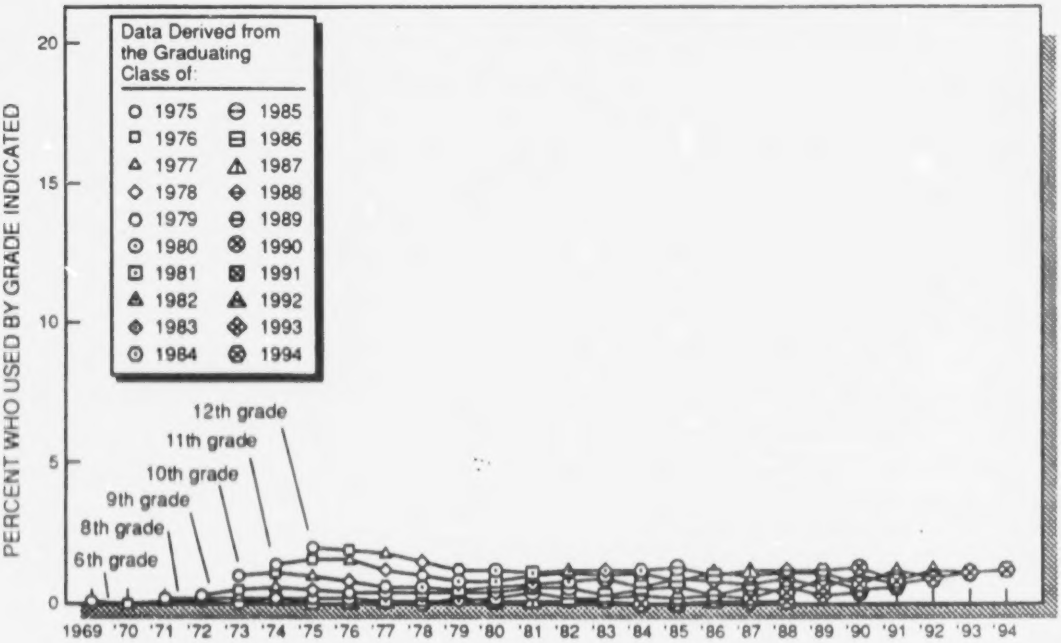


FIGURE 18o

Other Opiates: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

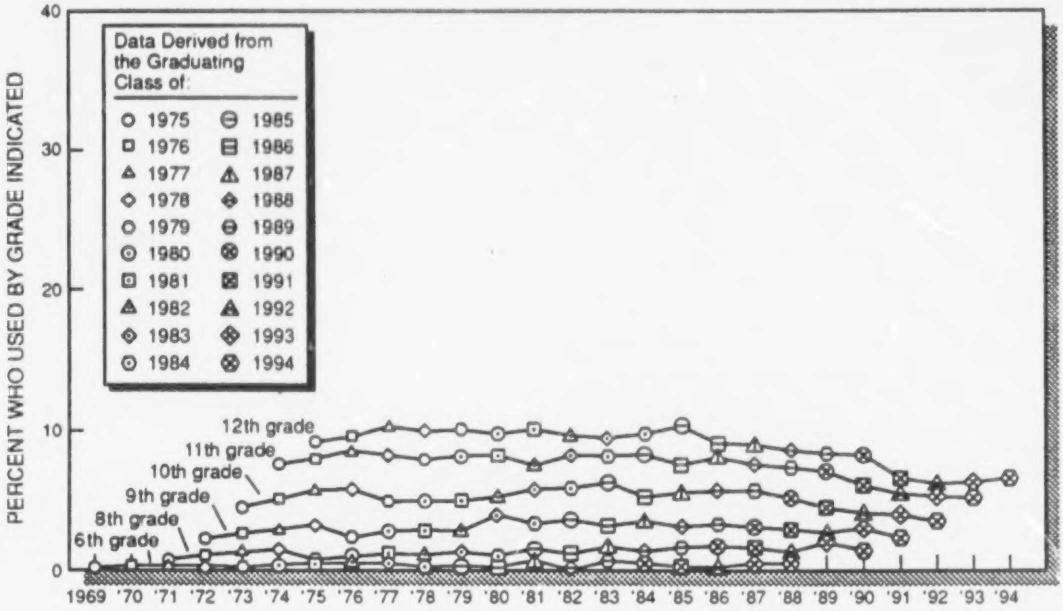
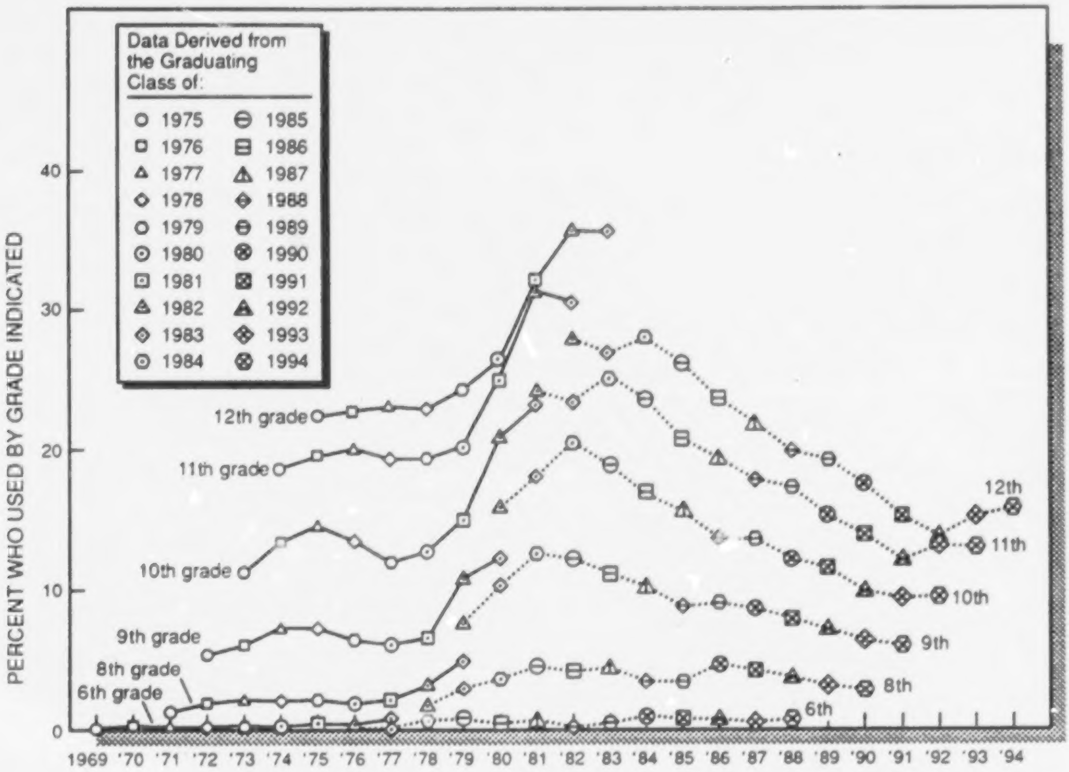


FIGURE 18p

Stimulants: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 18q

Barbiturates: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

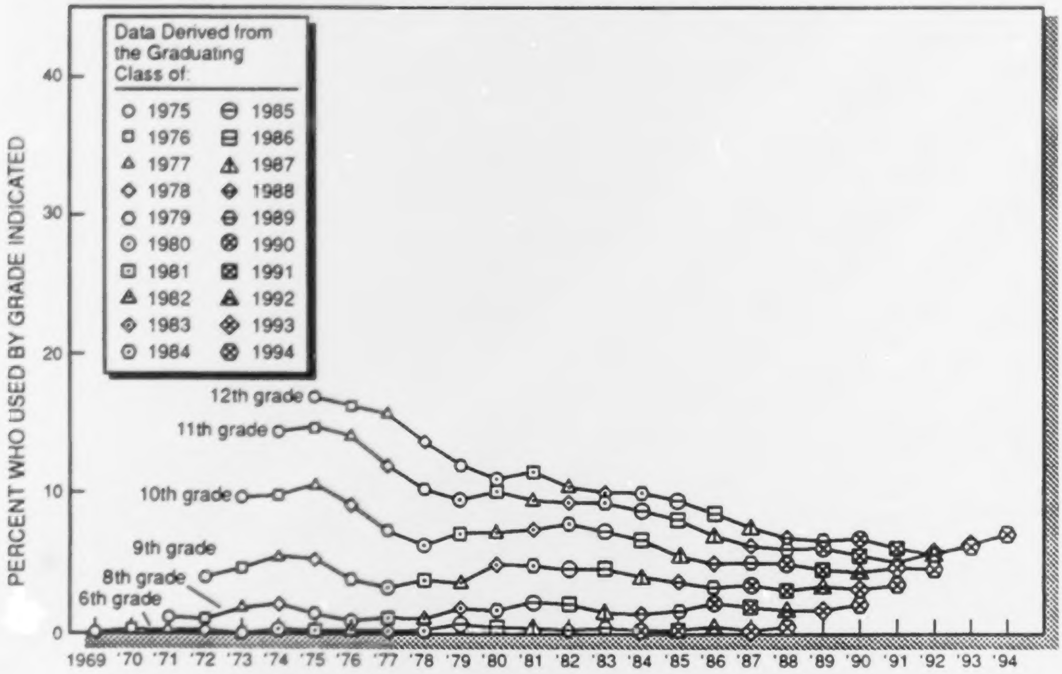


FIGURE 18r

Methaqualone: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

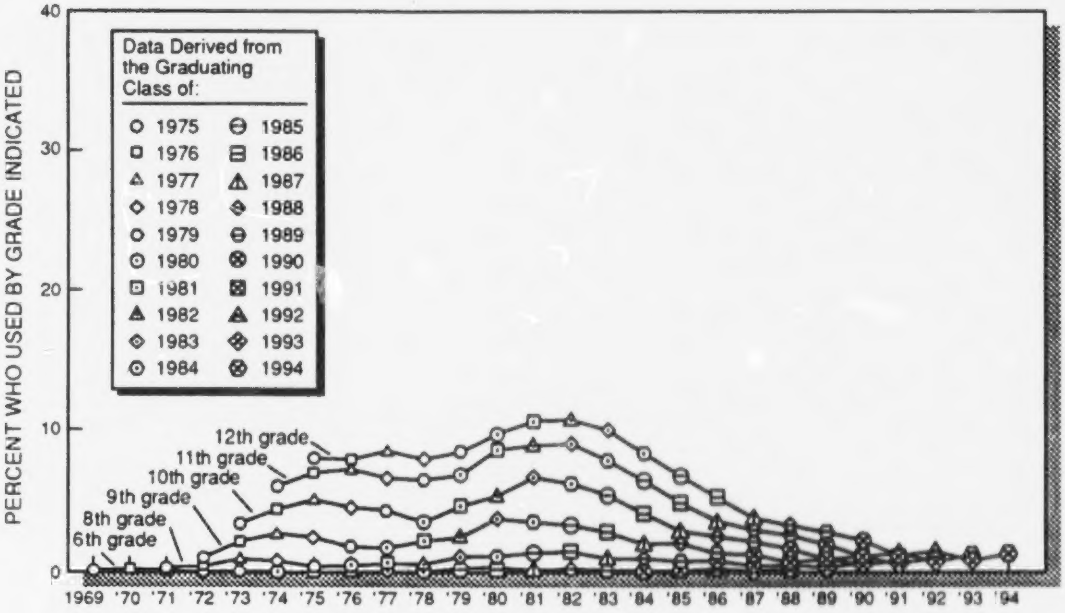


FIGURE 18s

Tranquilizers: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

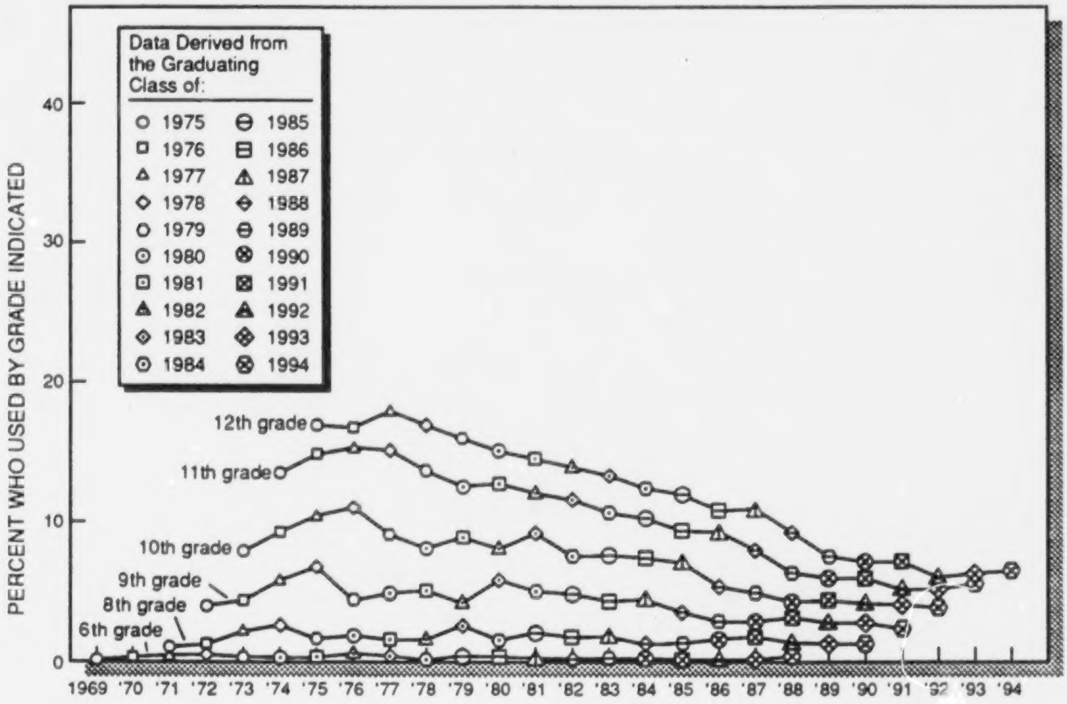
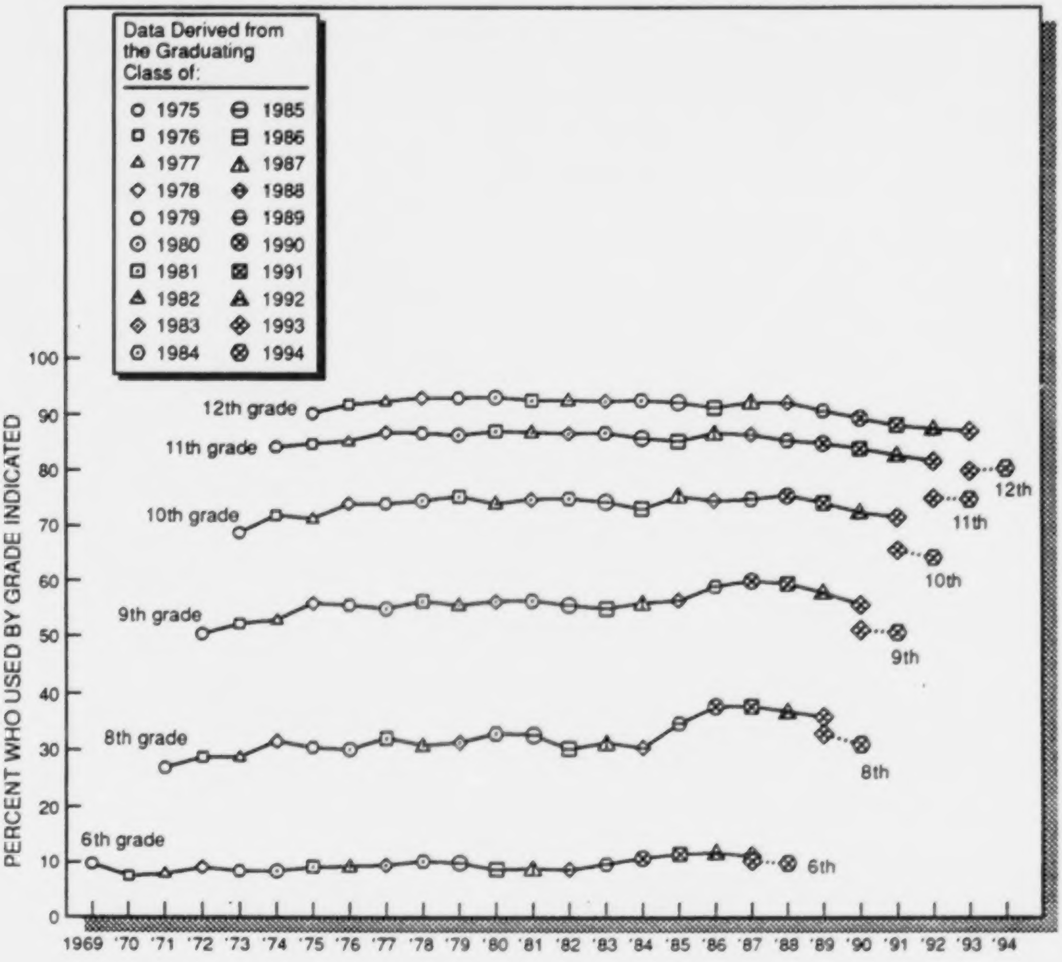


FIGURE 18t

Alcohol: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders



NOTE: The dotted lines connect percentages based on the revised alcohol question.

FIGURE 18u

Been Drunk: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

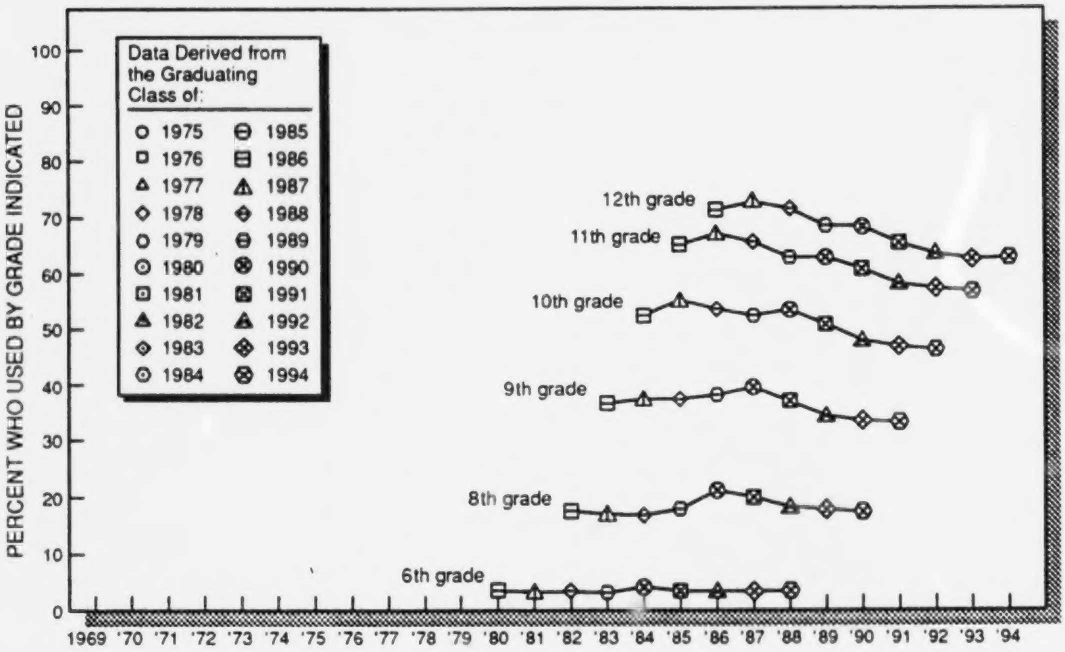


FIGURE 18v

Cigarettes: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

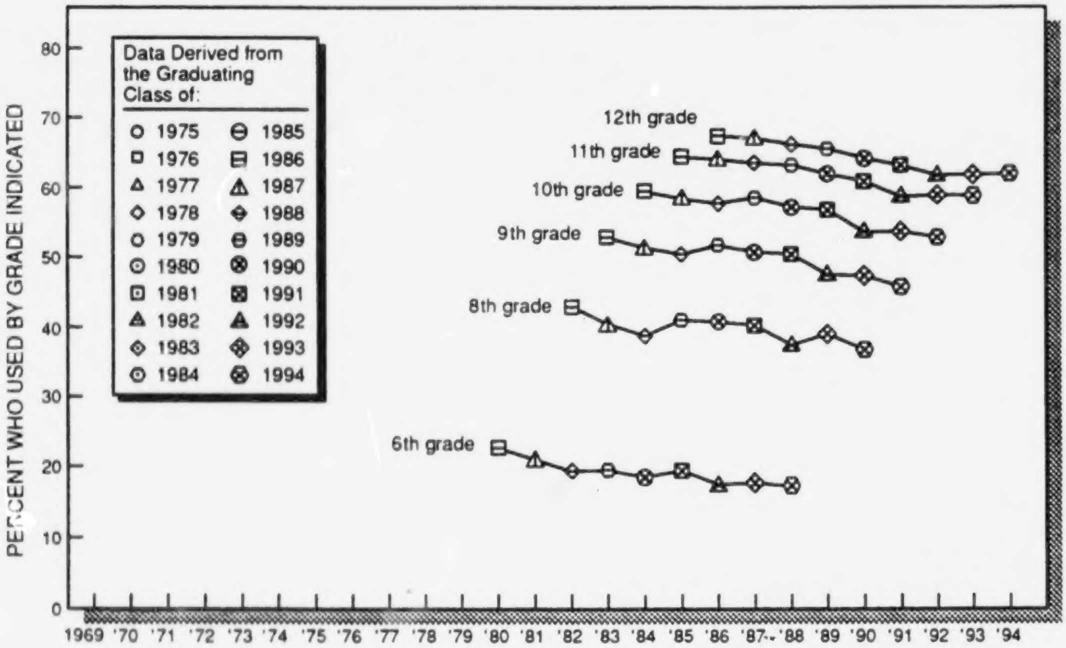


FIGURE 18w

Cigarette Smoking on a Daily Basis: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders

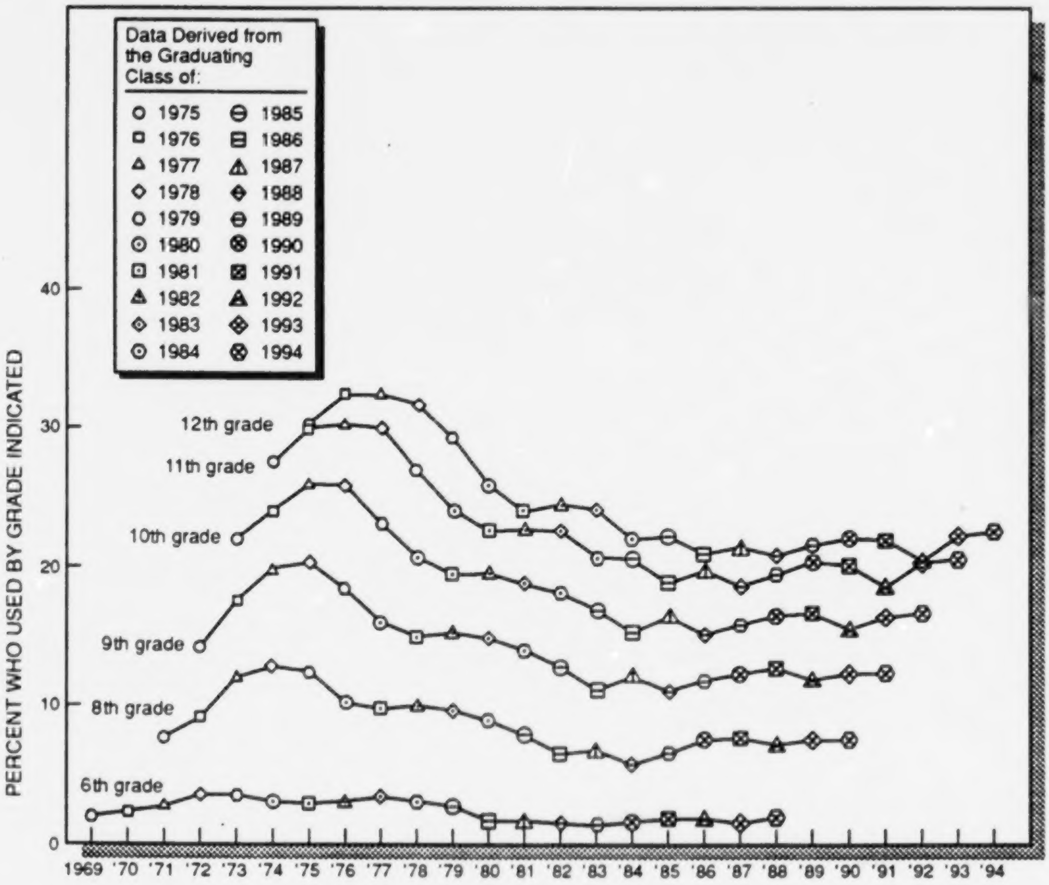


FIGURE 18x

Smokeless Tobacco: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

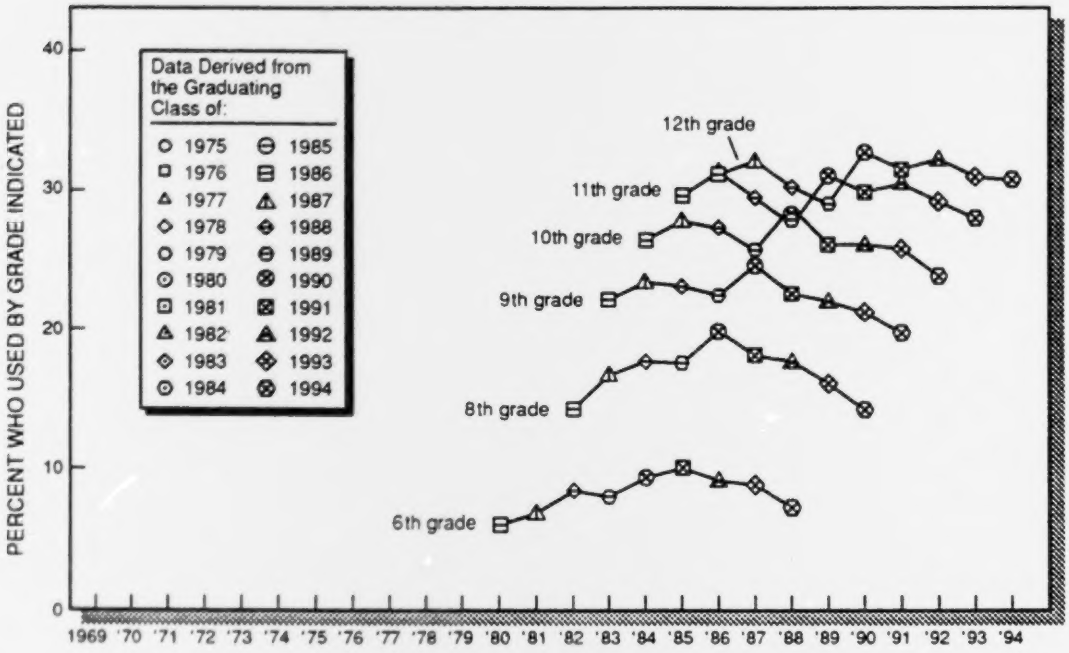
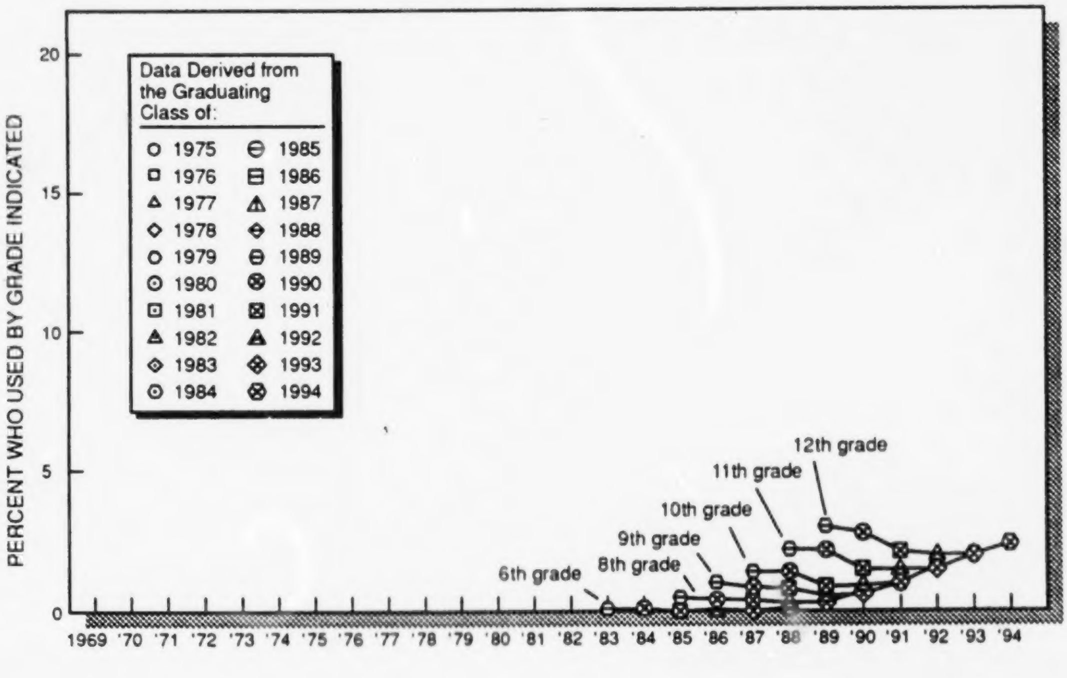


FIGURE 18y

Steroids: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders



Chapter 7

DEGREE AND DURATION OF DRUG HIGHS

Most illicitly-used drugs are not purchased in precisely defined (or known) quantities or purities. Therefore, in order to secure indirect measures of the dose or quantity of a drug consumed per occasion, and also to help characterize the typical drug-using event for each type of drug, we have asked twelfth grade respondents on one of the six questionnaire forms to indicate—for each drug that they report having used in the past twelve months—how high they usually get, and how long they usually stay high. The results from those questions are discussed in this chapter, along with trends since 1975, in the degree and duration of the highs usually associated with each of the relevant drugs. Since these questions were not included in the questionnaires administered to eighth and tenth graders, all of the data presented in this chapter are derived from high school seniors.

DEGREE AND DURATION OF HIGHS AMONG TWELFTH GRADERS

Figure 19 shows the proportion of 1994 seniors who say that they *usually* get "not at all" high, "a little" high, "moderately" high, or "very" high when they use a given type of drug. The percentages are based on all respondents who report use of the given drug class in the previous twelve months, and therefore each bar cumulates to 100%. The ordering from left to right is based on the percentage of users of each drug who report that they usually get "very" high.

- ***Hallucinogens*** (LSD and hallucinogens other than LSD[28]) and ***heroin*** usually produce intense highs. Beginning in 1982, this question was omitted for heroin because of the small numbers of cases available each year. An averaging across earlier years indicated that it would rank very close to LSD.

- Following closely are ***cocaine*** and ***marijuana*** with two-thirds of the users of each saying they usually get moderately high or very high when using the drug. Methaqualone and barbiturates are no longer included in these item sets. (Methaqualone used to rank quite high on the question about the intensity of the highs attained.)

- Three of the major psychotherapeutic drug classes—***opiates other than heroin***, ***stimulants***, and ***tranquilizers***—are used less often to get high; but substantial proportions of users (from 28% for tranquilizers to 44% for other opiates) say they usually get moderately or very high after taking these drugs.

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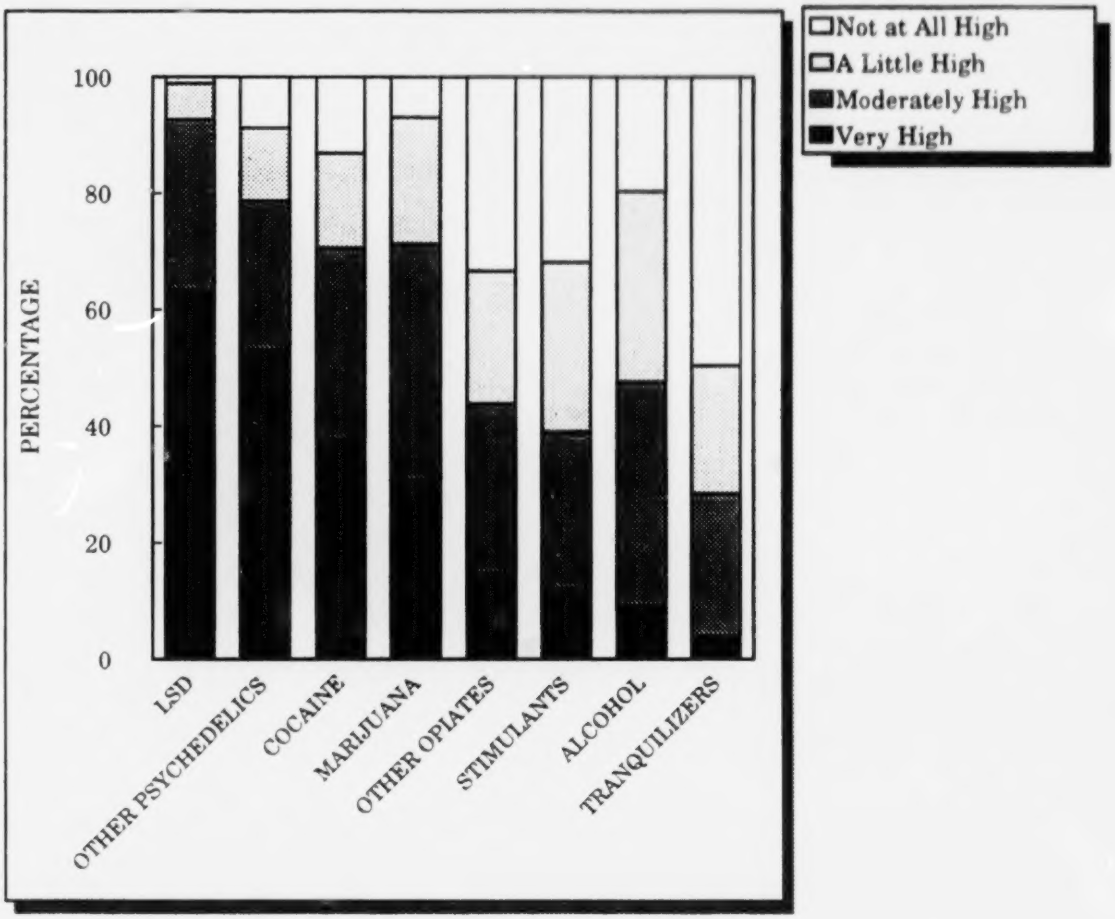
[28] Hallucinogens other than LSD are referred to as "other psychedelics" in Figures 19 and 20.

FIGURE 19

Degree of Drug Highs Attained by Recent Users

Twelfth Graders, 1994



NOTE: Data are based on answers from respondents reporting any use of the drug in the prior twelve months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

- Relatively few of the many seniors using ***alcohol*** say that they usually get *very* high when drinking, although nearly half usually get at least moderately high. For a given individual we would expect more variability in the degree of intoxication achieved with alcohol from occasion to occasion than with most other drugs. Therefore, many drinkers probably get very high at least sometimes, even if that is not "usually" the case, which is what the question asks.

- Figure 20 presents the data on the duration of the highs usually obtained by users of each class of drugs. The drugs are arranged in the same order as for intensity of highs to permit an examination of the amount of correspondence between the degree and duration of highs.

- As can be seen in Figure 20, those drugs which result in the most intense highs generally tend to result in the longest highs. For example, ***LSD*** and ***hallucinogens other than LSD*** rank one and two respectively on both dimensions, with substantial proportions of the users of these drugs (74% and 40%, respectively) saying they usually stay high for seven hours or more.

- There is not a perfect correspondence between degree and duration of highs. Although the highs obtained with ***marijuana*** tend to be relatively high in degree, they are shorter in duration in comparison with many other drugs. About half of marijuana users (47%) usually stay high one to two hours, and the modal duration is one to two hours. Still, over one-third of the users (36%) report usually staying high three to six hours, and another 7% stay high for seven hours or more.

- Among ***cocaine*** users, 53% stay high one to two hours, and 20% stay high three to six hours. More than one in six (17%) stay high seven or more hours. The remaining 10% say they usually don't get high.

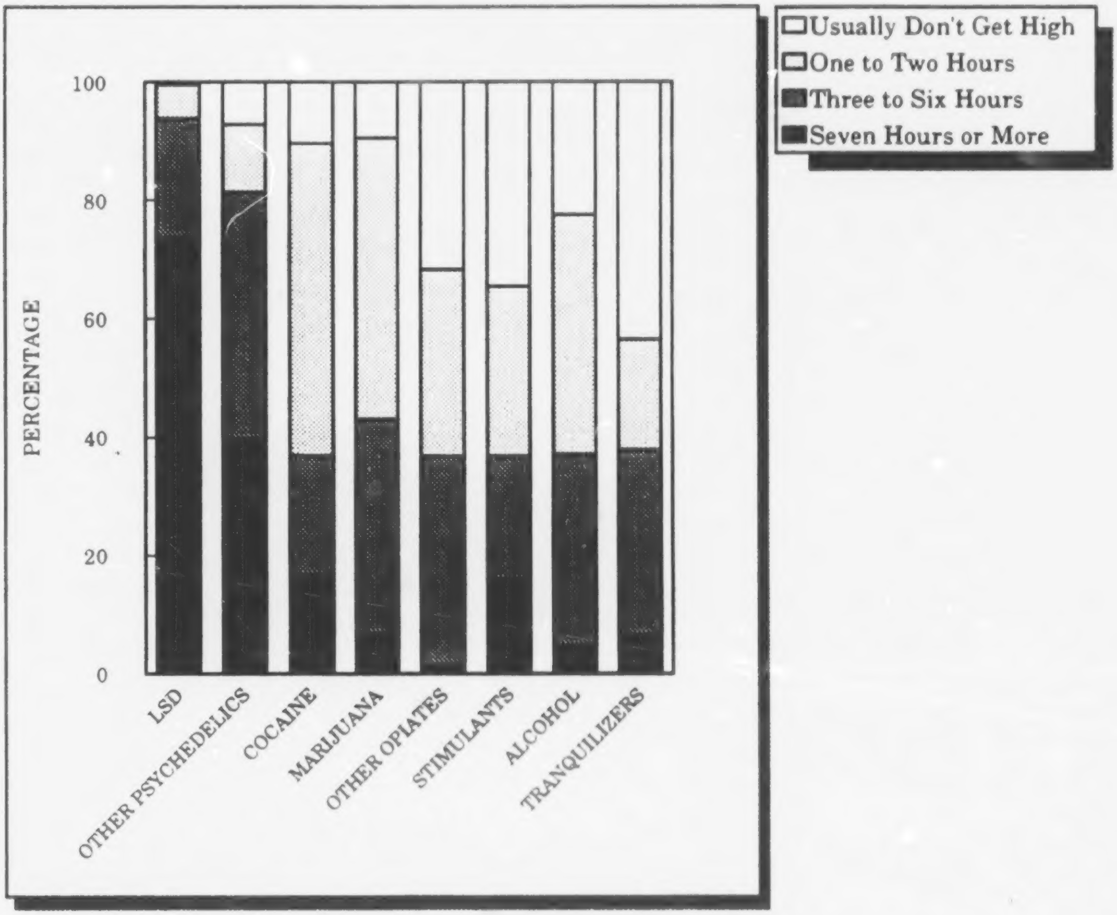
- Among those who get high, the modal duration of highs for users of ***marijuana, cocaine***, and ***stimulants*** is one to two hours.

- In sum, drugs vary considerably in both the duration and degree of the highs usually obtained from them. Sizeable proportions of the users of all of these drugs report that they usually get high for at least three hours per occasion. For a number of drugs—particularly the ***hallucinogens***, but also ***stimulants*** and ***cocaine***—appreciable proportions usually stay high for seven hours or more. (These data obviously do not address the qualitative differences in the experiences of being "high.")

FIGURE 20

Duration of Drug Highs Attained by Recent Users

Twelfth Graders, 1994



NOTE: Data are based on answers from respondents reporting any use of the drug in the prior twelve months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

TRENDS IN DEGREE AND DURATION OF DRUG HIGHS

There have been several important shifts over the years in the degree or duration of highs usually experienced by users of the various drugs. Recall that only those students who used in the prior twelve months answer these questions.

- The *degree* of high obtained from ***cocaine*** appears to have remained fairly constant over the past twenty years. The story on the *duration* of highs, however, has been more complex. At the onset phase of the cocaine epidemic (1976-1979), the average duration of highs shortened; the proportion of users reporting highs of two hours *or less* rose from 30% to 49%. The proportion reporting these short highs continued to rise to 64% by 1989, where it closely remains in 1994. Put another way, in the decline phase of the epidemic the *average duration* of cocaine highs increased.

- For ***opiates other than heroin***, between 1975 and 1994 there has been a general decline in both the intensity of the highs usually experienced *and* in the duration of those highs. In 1975, 39% said they usually got "very high" vs. 15% in 1994. The proportion usually staying high for seven or more hours dropped from 28% in 1975 to 1.6% in 1994. This shift has occurred, in part, due to a substantial increase in the proportion of users who say they do not take these drugs "to get high" (4% in 1975 vs. 23% in 1994). Because the actual prevalence of opiate use has dropped only modestly, this would suggest that increasing use for self-medication may have masked, to some degree, a decrease in recreational use.

- Between 1975 and 1981, a period of increase in ***stimulant*** use among seniors, there was a decrease in the average *degree* of high obtained, much as occurred with cocaine. The proportion of recent users usually getting very high or moderately high fell from 60% in 1975 to 37% in 1981. Consistent with this, the proportion of users saying they simply "don't take them to get high" increased from 9% in 1975 to 20% by 1981, and has remained roughly the same (no statistically significant changes) thereafter.

  Also, the average reported *duration* of stimulant highs was declining over the longer term; 41% of the 1975 users said they usually stayed high seven or more hours vs. only 17% of the 1981 users.[29] In 1994, 16% of them said they usually stay high that long.

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[29] In 1982, the questionnaire form containing the questions on degree and duration of highs clarified the amphetamine questions to eliminate the inappropriate inclusion of nonprescription stimulants. One might have expected this change to have increased the degree and duration of highs reported, given that real amphetamines would be expected to have greater psychological impact on the average; but the trends still continued downward that year.

These substantial decreases in both the degree and duration of highs from 1975 to 1981 strongly suggest that there was some shift in the purposes for which stimulants were being used. An examination of data on self-reported reasons for use tends to confirm this conclusion. In essence, between 1979 and 1984, there was a relative decline in the frequency with which recent users mention "social/ recreational" reasons for use, and between 1976 and 1984 there was an increase in mentions of use for instrumental purposes.[30] Since 1984 the shifts have been slight and tend *not* to be continuing the pre-1984 trends.

- With respect to the social/recreational shifts from 1979 to 1984, the percent of all recent users citing "to feel good or get high" as a reason for stimulant use declined from 58% to 45%; in 1994 the figure was 42%. Similarly, "to have a good time with my friends" declined from 38% to 30% between 1979 and 1984; in 1994 the figure was 29%. There were shifts toward more instrumental use between 1976 and 1984: "to lose weight" increased by 15% (to 41%); "to get more energy" increased 13% (to 69%); "to stay awake" increased by 10% (to 62%) and "to get through the day" increased by 9% (to 32%). Since 1988, these instrumental objectives have been mentioned somewhat less often by users: In 1994, "to lose weight" is mentioned by 38% of recent users; "to get more energy" by 62%; "to stay awake" by 54%; and "to get through the day" by 23%.

- Despite the earlier *relative* decline in recreational reasons for use of stimulants, it also appears that there was at least some increase in the *absolute* level of recreational use, though clearly not as steep an increase as the trends through 1981 in overall use might have suggested. The data on the percent of seniors exposed to people using amphetamines "to get high or for kicks," which will be discussed further in Chapter 9, showed a definite increase between 1976 and 1981. There was no further increase in exposure to people using for those purposes in 1982, however, suggesting that recreational use, as well as overall use, had leveled off; since 1982 there has been a considerable decrease in such exposure (from 50% to 28% of all seniors in 1994), indicating a substantial drop in the total number of people using stimulants for recreational purposes.

- The degree and duration of highs achieved by ***tranquilizer*** users have been decreasing generally since about 1980. While only 30% of the 1975 senior users said they did not usually get high, 44% of the 1994 users said that they did not.

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[30] Johnston, L.D. & O'Malley, P.M. (1986). Why do the nation's students use drugs and alcohol? Self-reported reasons from nine national surveys. *Journal of Drug Issues, 16*, 29-66.

- For ***marijuana*** there had been some general downward trending between 1978 and 1983 in the degree of the highs usually obtained. In 1978, 73% of users said they usually got "moderately high" or "very high"–a figure which dropped to 64% by 1983. In 1994 this proportion stands at 71%. Some interesting changes also took place in the duration figures between 1978 and 1983. Recall that most marijuana users say they usually stay high either one to two hours *or* three to six hours. Between 1975 and 1983 there was a steady decline in the proportion of users saying they stayed high three or more hours (from 52% in 1975 to 35% in 1983); the proportion stands at 43% in 1994. Until 1979, this shift could have been due almost entirely to the fact that progressively more seniors were using marijuana; and the users in later classes, who might *not* have been users if they were in earlier classes, probably tended to be relatively light users. We deduce this from the fact that the percentage of *all* seniors reporting three to six hour highs remained relatively unchanged from 1975 to 1979, while the percentage of all seniors reporting only one to two hour highs increased steadily–from 16% in 1975 to 25% in 1979.

- After 1979, the overall prevalence rate declined substantially, but the shift toward shorter average highs continued through 1983. Thus we must attribute this shift to another factor, and the one which seems most likely is a general shift, even among the most marijuana-prone segment, toward a less frequent (or less intense) use of the drug. The drop in daily prevalence since 1979, which was disproportionate to the drop in overall prevalence, is consistent with this interpretation. Also consistent is the fact that the average number of "joints" smoked per day (among those who reported any use in the prior month) also dropped. In 1976, 55% of the recent (past 30-days) users of marijuana indicated that they averaged less than one joint per day in the prior 30 days, but by 1994 this proportion had risen to 67%. In sum, not only were fewer high school students using marijuana than in the early years of this study, but those who were using seemed to be using less frequently and to be taking smaller amounts (and doses of the active ingredient) per occasion, at least through 1988. More recently, as an increase in marijuana use has developed, there has been some slight upward trend in average duration of highs: in 1994, 43% of users reported usually staying high for three or more hours, compared to 34% in 1988.

- The fact that ***marijuana*** highs remained fairly constant in degree–in fact became less intense–through the eighties is of particular interest in light of the evidence from other sources that the THC content of marijuana had risen substantially since the late 1970s. The evidence here would suggest that users have titrated their intake to achieve a certain (perhaps declining) level of high, and thus are smoking less marijuana as measured by volume.

- There are no clearly discernible long-term patterns in the intensity or duration of the highs being experienced by users of ***LSD*** or ***hallucinogens other than LSD***. Although the proportion of LSD users who say they usually get "very high" has fallen some since 1989 (from 71% to 63% in 1994). The proportion of users of hallucinogens other than LSD who report getting "very high" has also dropped slightly, from 57% in 1989 to 53% in 1994.

- Data are not collected for highs experienced in the use of ***inhalants***, the specific ***nitrites***, ***PCP***, or ***heroin***.

- The intensity and duration of highs associated with ***alcohol*** use generally have been stable throughout the study period, although there were indications of a slight increase in the percentage of alcohol users who do not usually get high; in 1993, 24% of users say they usually get "not at all high," compared to 20% in 1988. In 1994, however, when most measures of drinking rose, this proportion fell to 20%.

Chapter 8

ATTITUDES AND BELIEFS ABOUT DRUGS

When this study was launched in 1975, we allocated a considerable amount of questionnaire content to the measurement of certain attitudes and beliefs related to drug use–ones which we believed might prove important in explaining young people's use of drugs. Over the years, this has proven to be a particularly fruitful investment.

In this section we present the cross-time results for three of these sets of attitude and belief questions. One set concerns students' beliefs about how harmful the various kinds of drug use are for the user; the second concerns the degree to which students personally disapprove of various kinds of drug use; and the third, asked only of seniors, deals with their attitudes about various forms of legal prohibition. Chapter 9 will present results on the closely related topics of parents' and friends' attitudes about drugs, as students perceive them.

As the data below show, overall percentages of students disapproving various drugs, and the percentages believing their use to involve serious risk tend to parallel the percentages of actual users. For example, of the illicit drugs, marijuana is the most frequently used and one of the least likely to be seen as risky to use. This and many other such parallels suggest that the individuals who believe that the use of a drug involves risk of harm are less likely to use it, and also more likely to disapprove of its use. A series of individual-level analyses of these data confirms this conclusion: strong correlations exist between individuals' use of drugs and their various attitudes and beliefs about those drugs. Those seniors who use a given drug also are less likely to disapprove its use or to see it as dangerous, and they are more likely to report their own parents and friends as being accepting of its use.

Many of the attitudes and beliefs about drug use reported below changed dramatically during the life of the study, along with actual drug-using behaviors. Beginning in 1979, scientists, policy makers, and in particular the electronic and printed media, gave considerable attention to the increasing levels of regular marijuana use among young people, and to the potential hazards associated with such use. As will be seen below, after 1979 attitudes and beliefs about regular use of marijuana shifted in a more conservative direction—a shift which coincides with a reversal in the previous rapid rise of daily use, and which very likely reflects the impact of this increased public attention. Between 1986 and 1987, a similar and even more dramatic shift began to occur for cocaine and continued for some years. In the last three years, however, there has been some turnaround in these attitudes, accompanied by an increase in the use of a number of illicit drugs.

PERCEIVED HARMFULNESS OF DRUGS

Beliefs about Harmfulness Among Twelfth Graders

- A substantial majority of high school seniors perceive regular use of ***any of the illicit drugs*** as entailing "great risk" of harm for the user. As Table 20 shows, almost 90% of the seniors feel this way about regular use of ***cocaine, crack, cocaine powder***, and ***heroin***. The proportions attributing great risk to regular use of ***LSD, amphetamines***, and ***barbiturates*** are 79%, 67%, and 63%, respectively.

- Regular use of ***marijuana*** is judged to involve great risk by 65% of the seniors.

- Regular use of ***cigarettes*** (i.e., one or more packs a day) is judged by about two-thirds of all seniors (68%) as entailing a great risk of harm for the user.

- Regular use of ***alcohol*** is more explicitly defined in several questions providing greater specificity on the amount of use. Over a quarter of seniors (27%) associate great risk of harm with having one or two drinks almost daily. Close to half (47%) think there is great risk involved in having five or more drinks once or twice each weekend. Two-thirds (66%) think the user takes a great risk in consuming four or five drinks nearly every day. It is notable that one-third do not view even this pattern of regular heavy drinking as entailing great risk.

- Compared with perceptions about the risks of regular use of each drug, many fewer respondents feel that a person runs a "great risk" of harm by simply trying the drug once or twice.

- Still, experimental use of most illicit drugs is viewed as risky by substantial proportions of high school seniors. The percentages associating great risk with experimental use rank order as follows: 66% for ***steroids***, 58% for ***crack*** and ***ice***, 57% for ***cocaine***, 55% for ***cocaine powder***, 53% for ***heroin***, 52% for ***PCP***, 39% for ***LSD***, 31% for ***amphetamines***, 30% for ***barbiturates***, and 20% for ***marijuana***.

- Very few seniors (8%) believe there is much risk involved in trying an ***alcoholic beverage*** once or twice.

Beliefs about Harmfulness Among Eighth and Tenth Graders

An abbreviated set of the same questions on harmfulness was asked of eighth and tenth graders beginning in 1991, and additional questions were added about the perceived harmfulness of inhalants and smokeless tobacco (see Table 19). Although the findings are quite similar to those for seniors in general, there are some interesting differences, as well.

- The most important difference is observed for ***regular cigarette smoking***. It is an unfortunate fact that perceived risk is lowest at the ages where initiation is most likely to occur. While nearly 70% of seniors see great risk in pack-a-day smoking, only 59% of the tenth graders and 51% of the eighth graders do.

TABLE 19

Trends in Harmfulness of Drugs as Perceived by Eighth, Tenth, and Twelfth Graders, 1991–1994

Percentage saying "great risk"[a]

Q How much do you think people risk harming themselves (physically or in other ways), if they . . .	8th Grade					10th Grade					12th Grade				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change
Try marijuana once or twice	40.4	39.1	36.2	31.6	-4.6sss	30.0	31.9	29.7	24.4	-5.3sss	27.1	24.5	21.9	19.5	-2.4
Smoke marijuana occasionally	57.9	56.3	53.8	48.6	-5.2sss	48.6	48.9	46.1	38.9	-7.2sss	40.6	39.6	35.6	30.1	-5.5sss
Smoke marijuana regularly	83.8	82.0	79.6	74.3	-5.3sss	82.1	81.1	78.5	71.3	-7.2sss	78.6	76.5	72.5	65.0	-7.5sss
Try inhalants once or twice	35.9	37.0	36.5	37.9	+1.4	37.8	38.7	40.9	42.7	+1.8s	—	—	—	—	—
Try inhalants regularly	65.6	64.4	64.6	65.5	+0.9	69.8	67.9	69.6	71.5	+1.9s	—	—	—	—	—
Take LSD once or twice[b]	—	—	42.1	38.3	-3.8ss	—	—	48.7	46.5	-2.2	46.6	42.3	39.5	38.8	-0.7
Take LSD regularly[b]	—	—	68.3	65.8	-2.5	—	—	78.9	75.9	-3.0ss	84.3	81.8	79.4	79.1	-0.3
Try crack once or twice	62.8	61.2	57.2	54.4	-2.8ss	70.4	69.6	66.6	64.7	-1.9s	60.6	62.4	57.6	58.4	+0.8
Take crack occasionally	82.2	79.6	76.8	74.4	-2.4s	87.4	86.4	84.4	83.1	-1.3	76.5	76.3	73.9	73.8	-0.1
Try cocaine powder once or twice	55.5	54.1	50.7	48.4	-2.3ss	59.1	59.2	57.5	56.4	-1.1	53.6	57.1	53.2	55.4	+2.2
Take cocaine powder occasionally	77.0	74.3	71.8	69.1	-2.7s	82.2	80.1	79.1	77.8	-1.3	69.8	70.8	68.6	70.6	+2.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	11.0	12.1	12.4	11.6	-0.8	9.0	10.1	10.9	9.4	-1.5ss	9.1	8.6	8.2	7.6	-0.6
Take one or two drinks nearly every day	31.8	32.4	32.6	29.9	-2.7ss	36.1	36.8	35.9	32.5	-3.4sss	32.7	30.6	28.2	27.0	-1.2
Have five or more drinks once or twice each weekend	59.1	58.0	57.7	54.7	-3.0ss	54.7	55.9	54.9	52.9	-2.0s	48.6	49.0	48.3	46.5	-1.8
Smoke one or more packs of cigarettes per day	51.6	50.8	52.7	50.8	-1.9	60.3	59.3	60.7	59.0	-1.7	69.4	69.2	69.5	67.6	-1.9
Use smokeless tobacco regularly	35.1	35.1	36.9	35.5	-1.4	40.3	39.6	44.2	42.2	-2.0s	37.4	35.5	38.9	36.6	-2.3
Take steroids[c]	64.2	69.5	70.2	67.6	-2.6	67.1	72.7	73.4	72.5	-0.9	65.6	70.7	69.1	66.1	-3.0
Approx. N =	*17437*	*18662*	*18366*	*17394*		*14719*	*14808*	*15298*	*15880*		*2549*	*2684*	*2759*	*2591*	

NOTE: Level of significance of difference between the two most recent classes: s =.05, ss =.01, sss =.001.
'—' indicates data not available.

SOURCE: Monitoring The Future Study, The University of Michigan.

[a] Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, (5) Can't say, drug unfamiliar.

[b] 8th and 10th grade: Data based on a single questionnaire form. N is one-half of N indicated.

[c] 8th and 10th grade: Data based on two questionnaire forms in 1991 and 1992; data based on a single questionnaire form in 1993 and 1994. N is one-half of N indicated.

TABLE 20
Long-Term Trends in Harmfulness of Drugs as Perceived by Twelfth Graders

	Percentage saying "great risk"*																				
Q. How much do you think people risk harming themselves (physically or in other ways), if they . . .	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Try marijuana once or twice	15.1	11.4	9.5	8.1	9.4	10.0	13.0	11.5	12.7	14.7	14.8	15.1	18.4	19.0	23.6	23.1	27.1	24.5	21.9	19.5	-2.4
Smoke marijuana occasionally	18.1	15.0	13.4	12.4	13.5	14.7	19.1	18.3	20.6	22.6	24.5	25.0	30.4	31.7	36.5	36.9	40.6	39.6	35.6	30.1	-5.5sss
Smoke marijuana regularly	43.3	38.6	36.4	34.9	42.0	50.4	57.6	60.4	62.8	66.9	70.4	71.3	73.5	77.0	77.5	77.8	78.6	76.5	72.5	65.0	-7.5sss
Try LSD once or twice	49.4	45.7	43.2	42.7	41.6	43.9	45.5	44.9	44.7	45.4	43.5	42.0	44.9	45.7	46.0	44.7	46.6	42.3	39.5	38.8	-0.7
Take LSD regularly	81.4	80.8	79.1	81.1	82.4	83.0	83.5	83.5	83.2	83.8	82.9	82.6	83.8	84.2	84.3	84.5	84.3	81.8	79.4	79.1	-0.3
Try PCP once or twice	—	—	—	—	—	—	—	—	—	—	—	—	55.6	58.8	56.6	55.2	51.7	54.8	50.8	51.5	+0.7
Try cocaine once or twice	42.6	39.1	35.6	33.2	31.5	31.3	32.1	32.8	33.0	35.7	34.0	33.5	47.9	51.2	54.9	59.4	59.4	56.8	57.6	57.2	-0.4
Take cocaine occasionally	—	—	—	—	—	—	—	—	—	—	—	54.2	66.8	69.2	71.8	73.9	75.5	75.1	73.3	73.7	+0.4
Take cocaine regularly	73.1	72.3	68.2	68.2	69.5	69.2	71.2	73.0	74.3	78.8	79.0	82.2	88.5	89.2	90.2	91.1	90.4	90.2	90.1	89.3	-0.8
Try crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	57.0	62.1	62.9	64.3	60.6	62.4	57.6	58.4	+0.8
Take crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	70.4	73.2	75.3	80.4	76.5	76.3	73.9	73.8	-0.1
Take crack regularly	—	—	—	—	—	—	—	—	—	—	—	—	84.6	84.8	85.6	91.6	90.1	89.3	87.5	89.6	+2.1
Try cocaine powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	45.3	51.7	53.8	53.9	53.6	57.1	53.2	55.4	+2.2
Take cocaine powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	56.8	61.9	65.8	71.1	69.8	70.8	68.6	70.6	+2.0
Take cocaine powder regularly	—	—	—	—	—	—	—	—	—	—	—	—	81.4	82.9	83.9	90.2	88.9	88.4	87.0	88.6	+1.6
Try heroin once or twice	60.1	58.9	55.8	52.9	50.4	52.1	52.9	51.1	50.8	49.8	47.3	45.8	53.6	54.0	53.8	55.4	55.2	50.9	50.7	52.8	+2.1
Take heroin occasionally	75.6	75.6	71.9	71.4	70.9	70.9	72.2	69.8	71.8	70.7	69.8	68.2	74.6	73.8	75.5	76.6	74.9	74.2	72.0	72.1	+0.1
Take heroin regularly	87.2	88.6	86.1	86.6	87.5	86.2	87.5	86.0	86.1	87.2	86.0	87.1	88.7	88.8	89.5	90.2	89.6	89.2	88.3	88.0	-0.3
Try amphetamines once or twice	35.4	33.4	30.8	29.9	29.7	29.7	26.4	25.3	24.7	25.4	25.2	25.1	29.1	29.6	32.8	32.2	36.3	32.6	31.3	31.4	+0.1
Take amphetamines regularly	69.0	67.3	66.6	67.1	69.9	69.1	66.1	64.7	64.8	67.1	67.2	67.3	69.4	69.8	71.2	71.2	74.1	72.4	69.9	67.0	-2.9
Try crystal meth. (ice) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.9	57.5	58.3	+0.8
Try barbiturates once or twice	34.8	32.5	31.2	31.3	30.7	30.9	28.4	27.5	27.0	27.4	26.1	25.4	30.9	29.7	32.2	32.4	35.1	32.2	29.2	29.9	+0.7
Take barbiturates regularly	69.1	67.7	68.6	68.4	71.6	72.2	69.9	67.6	67.7	68.5	68.3	67.2	69.4	69.6	70.5	70.2	70.5	70.2	66.1	63.3	-2.8
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	5.3	4.8	4.1	3.4	4.1	3.8	4.6	3.5	4.2	4.6	5.0	4.6	6.2	6.0	6.0	8.3	9.1	8.6	8.2	7.6	-0.6
Take one or two drinks nearly every day	21.5	21.2	18.5	19.6	22.6	20.3	21.6	21.6	21.6	23.0	24.4	25.1	26.2	27.3	28.5	31.3	32.7	30.6	28.2	27.0	-1.2
Take four or five drinks nearly every day	63.5	61.0	62.9	63.1	66.2	65.7	64.5	65.5	66.8	68.4	69.8	66.5	69.7	68.5	69.8	70.9	69.5	70.5	67.8	66.2	-1.6
Have five or more drinks once or twice each weekend	37.8	37.0	34.7	34.5	34.9	35.9	36.3	36.0	38.6	41.7	43.0	39.1	41.9	42.6	44.0	47.1	48.6	49.0	48.3	46.5	-1.8
Smoke one or more packs of cigarettes per day	51.3	56.4	58.4	59.0	63.0	63.7	63.3	60.5	61.2	63.8	66.5	66.0	68.6	68.0	67.2	68.2	69.4	69.2	69.5	67.6	-1.9
Use smokeless tobacco regularly	—	—	—	—	—	—	—	—	—	—	—	25.8	30.0	33.2	32.9	34.2	37.4	35.5	38.9	36.6	-2.3
Take steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	63.8	69.9	65.6	70.7	69.1	66.1	-3.0
Approx. N =	*2804*	*2918*	*3052*	*3770*	*3250*	*3234*	*3604*	*3557*	*3305*	*3262*	*3250*	*3020*	*3315*	*3276*	*2796*	*2553*	*2549*	*2684*	*2759*	*2591*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

*Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

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- Regular use of ***smokeless tobacco*** is viewed as entailing great risk by slightly more than one-third (36%) of eighth grade students, and by only 42% of tenth graders. (The question is not asked of twelfth graders.) Again, because this behavior is often initiated at early ages, these figures are disturbingly low.

- In contrast to tobacco use, the younger students are somewhat more likely to see ***marijuana*** use as dangerous than are seniors. The same is true for the regular use of ***cocaine powder***.

- Eighth and tenth grade students are more likely than twelfth graders to see weekend ***binge drinking*** as dangerous, though their views on daily drinking and experimentation are not much different from seniors.

- These various differences among grade levels could reflect maturational (age) effects, or cohort effects, perhaps due to younger cohorts getting more drug education, or some combination of these effects. It will be a few years before we can begin to distinguish empirically among these interpretations.

- Experimentation with ***inhalants*** is seen as dangerous by relatively low proportions of eighth graders (38%) and tenth graders (43%), which may well explain the widespread use of inhalants at these ages. (The question is not asked of twelfth graders.)

TRENDS IN PERCEIVED HARMFULNESS OF DRUGS

Trends in Perceived Harmfulness Among Twelfth Graders

Several very important trends in these beliefs about the dangers associated with using various drugs have occurred over the life of the study. (See Table 20 and Figures 21a through 29b.)

- Some of the most important trends have involved ***marijuana*** (Figure 21a). From 1975 through 1978 there had been a decline in the harmfulness perceived to be associated with all levels of marijuana use, and use increased sharply. In 1979, for the first time, there was an increase in the proportion seeing risk to the user. This increase, which preceded an appreciable downturn in use, continued fairly steadily through 1991 as use fell dramatically. However, in 1992 perceived risk began to drop, and while use continued to fall that year, the drop presaged a sharp increase in use in 1993 and 1994, when perceived risk dropped further. We believe these changes in beliefs about the dangers of marijuana played a critical role in causing a turnaround in use. In this case, the decrease in perceived risk preceded the change in

FIGURE 21a

Trends in Perceived Harmfulness of Marijuana Use for Twelfth Graders

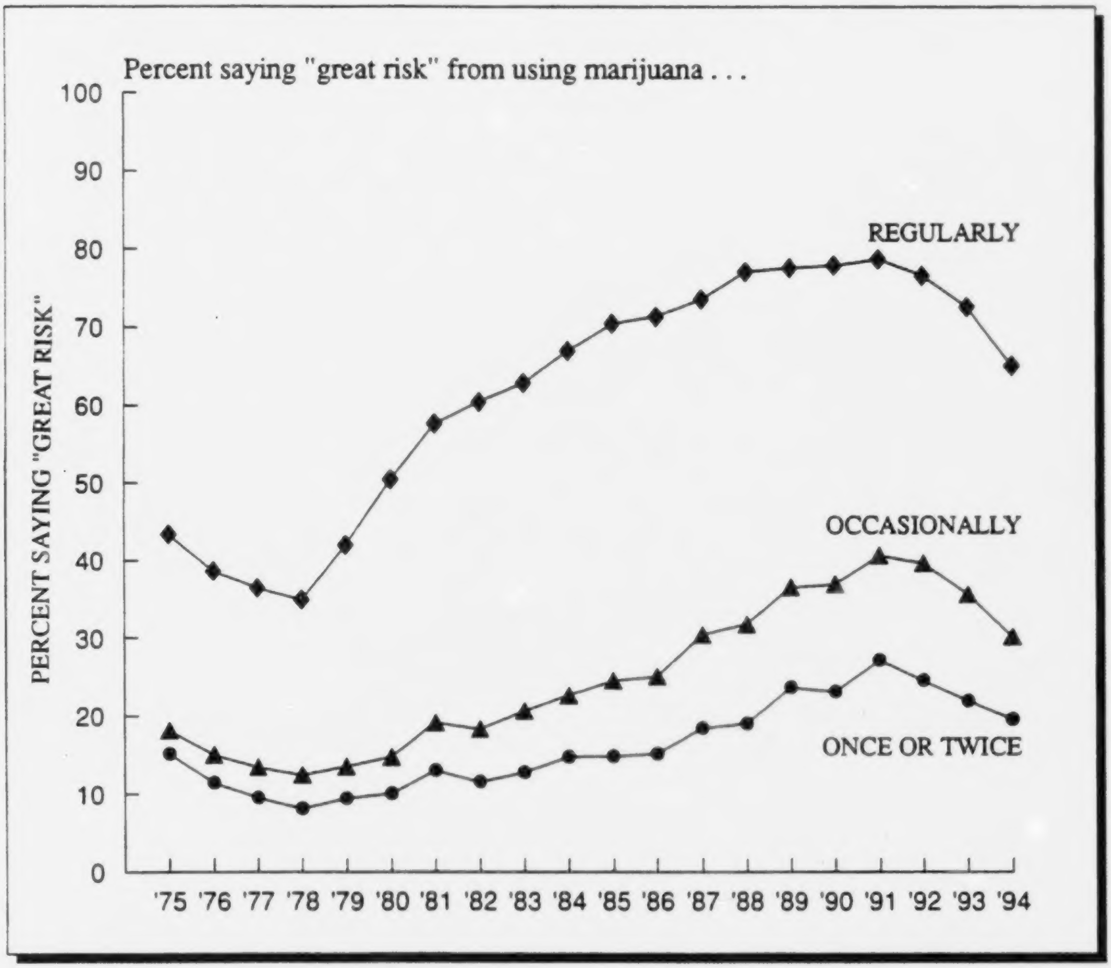


FIGURE 21b

Trends in Disapproval of Marijuana Use for Twelfth Graders

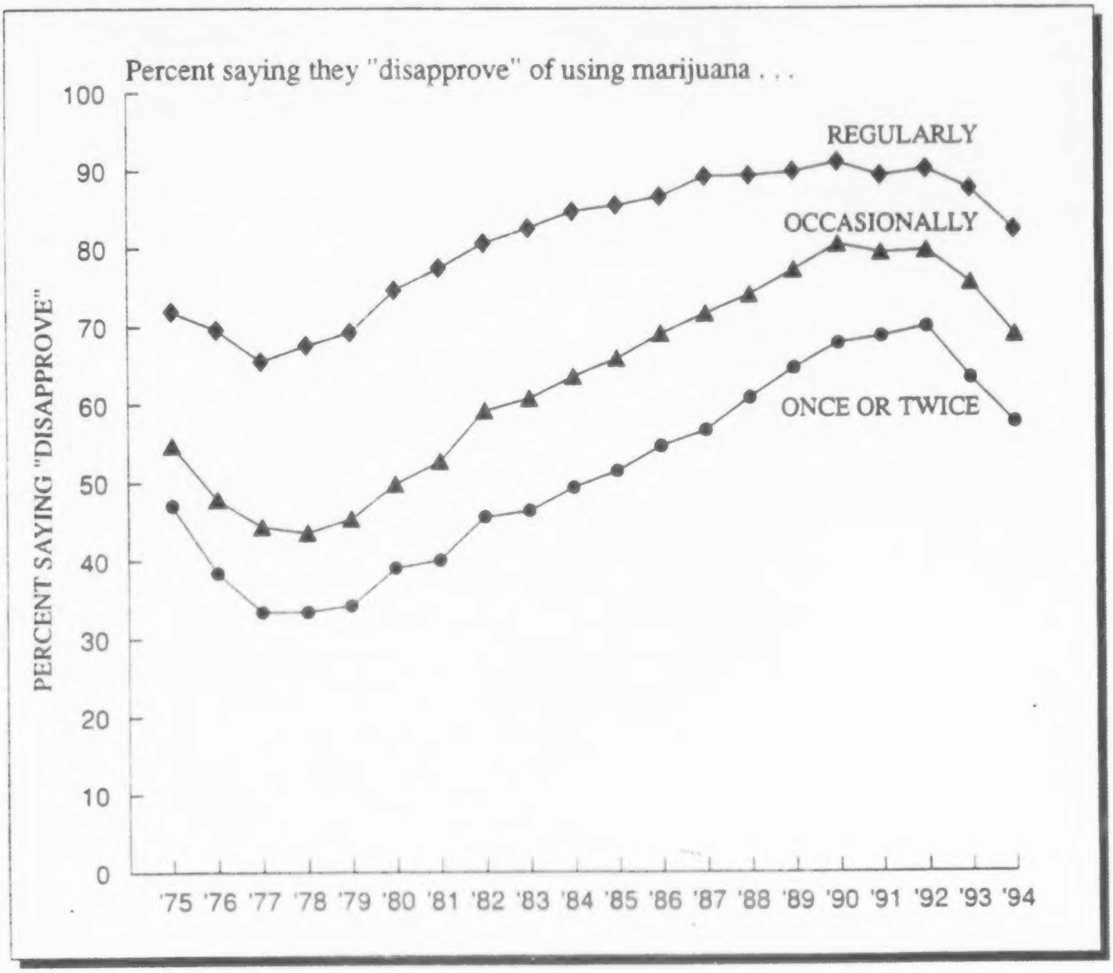


FIGURE 22a

Trends in Perceived Harmfulness of Cocaine Use for Twelfth Graders

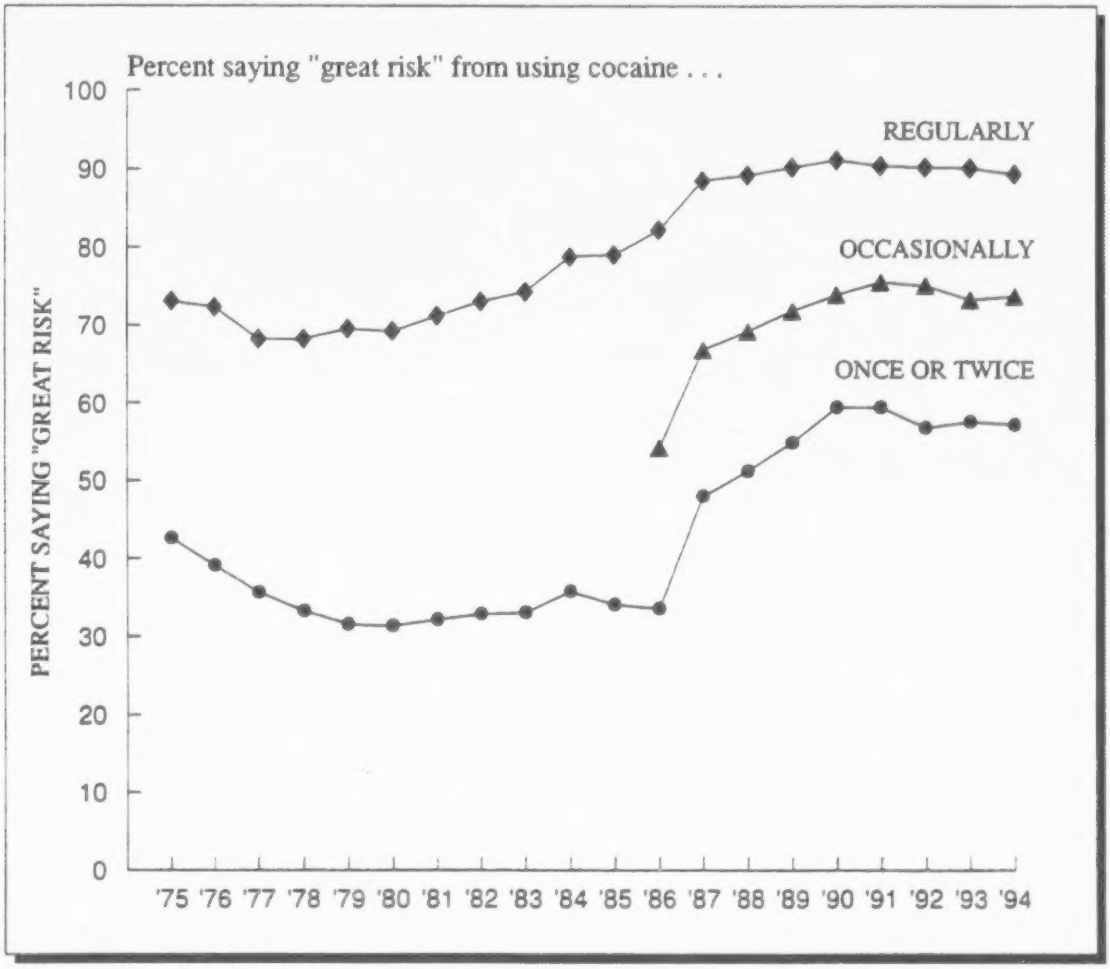


FIGURE 22b

Trends in Disapproval of Cocaine Use for Twelfth Graders

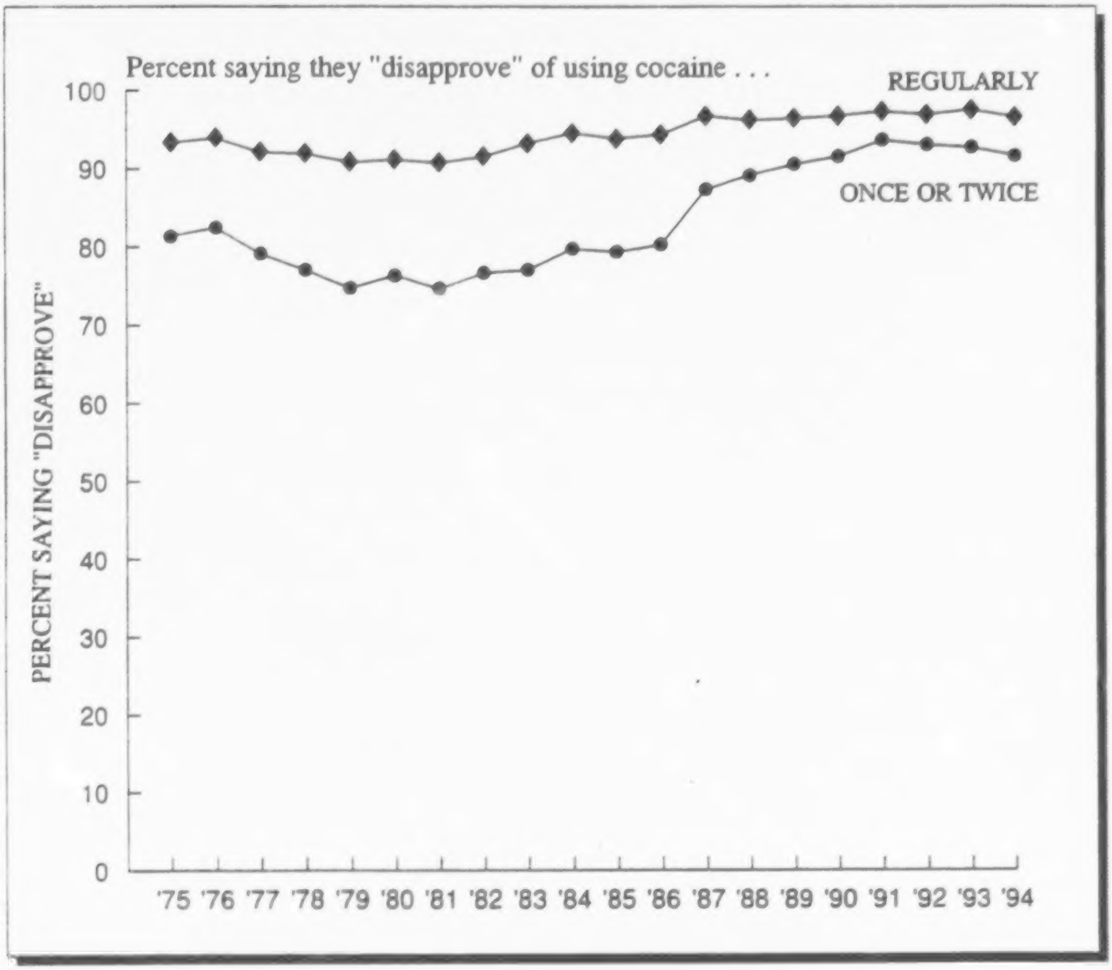
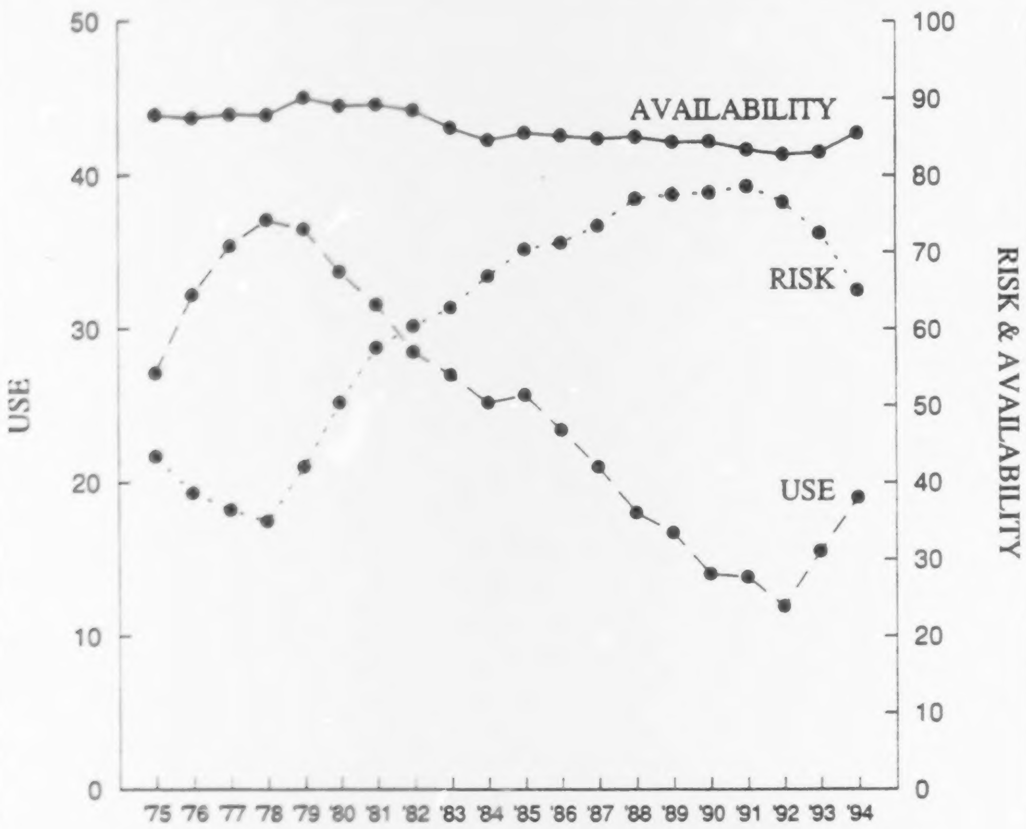


FIGURE 23

Marijuana: Trends in Perceived Availability, Perceived Risk of Regular Use, and Prevalence of Use in Past Thirty Days for Twelfth Graders



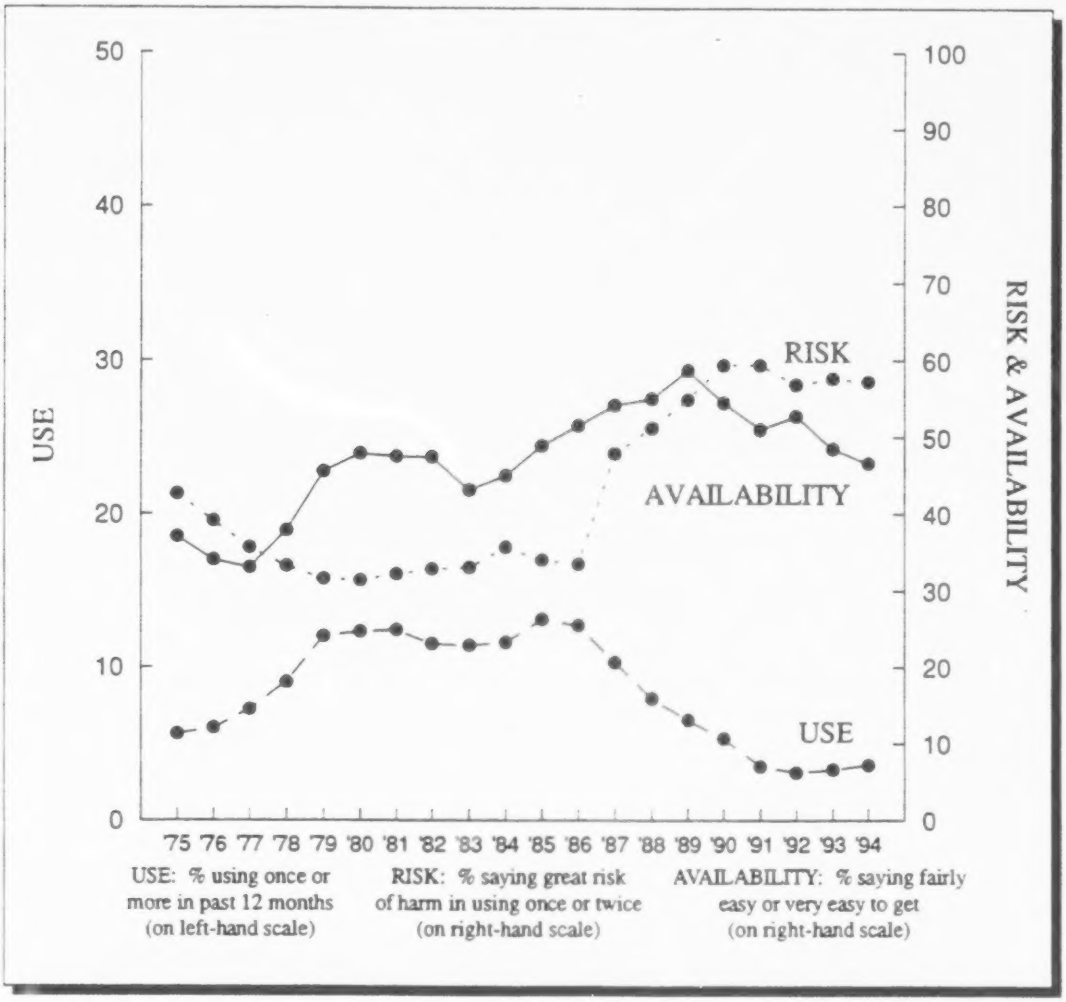
USE: % using once or more in past 30 days (on left-hand scale)

RISK: % saying great risk of harm in regular use (on right-hand scale)

AVAILABILITY: % saying fairly easy or very easy to get (on right-hand scale)

FIGURE 24

Cocaine: Trends in Perceived Availability, Perceived Risk of Trying, and Prevalence of Use in Past Year for Twelfth Graders



behavior by a year. By 1994 the annual drop in perceived risk had become very large (e.g., a drop of 8 percentage points with regard to regular use, 6 percentage points for occasional use, and 2 percentage points for experimental use). The rise in actual use also accelerated in 1994.

- In the earlier years of this study, the most impressive increase (in absolute terms) in perceived risk occurred for ***regular marijuana use***. The proportion perceiving such use as involving a great risk doubled in just seven years, from 35% in 1978 to 70% in 1985. Subsequently, the proportion continued to increase, more slowly, reaching 79% in 1991. The dramatic change between those years occurred during a period when a substantial amount of scientific and media attention was devoted to the potential dangers of heavy marijuana use. Young people also had ample opportunity for vicarious learning about the effects of heavy use through observation, because such use was so widespread among their peers. (Recall that one in nine seniors was an active daily marijuana user in 1979.) Increases in concerns about the harmfulness of occasional and even experimental use also occurred; these increases were even larger in proportional terms, though not in absolute terms. For example, the proportion of seniors seeing great risk in ***trying marijuana*** rose from 8% in 1978 to 27% in 1991, and for ***occasional marijuana use*** from 12% to 41%.

  There are several possible explanations for the recent decline in perceived risk. First, some of the forces which gave rise to the earlier increases in perceived risk have become less influential: (1) fewer of today's students have opportunities to observe firsthand the effects of heavy marijuana use among their peers because of lower use rates overall; (2) media coverage of harmful effects of drugs, and of incidents resulting from drug use (particularly marijuana) has decreased substantially in recent years; and (3) media coverage of the anti-drug advertising campaign of the Partnership for a Drug-Free America has declined appreciably. In addition, some forces *encouraging* use have become more visible in the past couple of years; in particular a number of rap groups, grunge groups, and other rock groups, have started to sing the praises of marijuana (and sometimes other drugs), which may cause youngsters to think that it must not be so dangerous after all. We believe that all of these factors may be contributing to the current resurgence in marijuana use.

- Returning to the full range of changes which have occurred, Figure 23 shows the trend in the perceived risk of regular marijuana use and the trend in thirty-day prevalence of use to illustrate more clearly their degree of covariance over time, which we interpret as reflecting a causal connection.[31] Also included is the trend line for the perceived availability of marijuana to show its lack of covariance with use, and thus its inability to explain the downturn.

We have hypothesized that perceived risk operates not only directly on use, but also indirectly through its impact on personal disapproval. In turn, personal disapproval operates directly on use, and in the collective, indirectly by influencing peer norms. Presumably there is some lag in the indirect effects; and, while perceived risk began to fall in 1992, personal disapproval did not begin to decline for experimental marijuana use until 1993, when it dropped sharply and use rose sharply. These shifts all continued into 1994.

- A similar cross-time profile of attitudes has emerged for ***cocaine*** (Figure 22a). First, the percentage who perceived great risk in ***trying cocaine*** once or twice dropped steadily from 43% to 31% between 1975 and 1980, a period of rapidly increasing use. However, rather than reversing sharply, as did perceived risk for marijuana, perceived risk for experimental cocaine use moved rather little for the next six years, 1980 to 1986, corresponding to a fairly stable period in actual use. Then in 1987 perceived risk for experimenting with cocaine jumped sharply from 34% to 48% in a single year and in that year the first significant decline in use took place. From 1987 to 1990 it continued to rise as use fell. Perceived risk reached its peak around 1991, and since then has decreased slightly. Trends in attitudes toward ***crack*** and ***cocaine powder*** have been similar to those of cocaine.

  We believe these changes in beliefs had an important impact on the behavior. As Figure 22a illustrates, perceived risk for ***regular cocaine use*** began to rise first, increasing gradually from 69% in 1980 to 82% in 1986; but we believe that change did not translate into a change in behavior, unlike the change for marijuana, because so few high school seniors were regular users and most did not ever expect to be. Thus, as we had predicted earlier, it was not until seniors' attitudes about behaviors which they saw as relevant to themselves began to change (i.e., for experimental and occasional cocaine use) that these attitudes began to affect their behavior.[32,33] Figure 24 shows trends in perceived risk, perceived availability, and actual use simultaneously–again, to show how shifts in perceived risk could explain the downturn in use while shifts in availability could not.

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[31] We have addressed an alternate hypothesis that a general shift toward a more conservative lifestyle might account for the shifts in both attitudes and behaviors. The empirical evidence tended to contradict that hypothesis. Bachman, J.G., Johnston, L.D., O'Malley, P.M., & Humphrey, R.H. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. *Journal of Health and Social Behavior, 29*: 92-112. And Johnston (1982) showed that an increasing proportion of the quitters and abstainers from marijuana use reported concern over the physical and psychological consequences of use as reasons for their non-use. Johnston, L.D. (1982). A review and analysis of recent changes in marijuana use by American young people. In *Marijuana: The national impact on education* (pp. 8-13). New York: American Council on Marijuana.

We attribute changes in actual drug-use behavior between 1986 and 1991 to changes in the risk perceived to be associated with experimental and occasional use. We believe the changes in these attitudes resulted from three factors: (1) the greatly increased media coverage of cocaine and its dangers which occurred in that interval (particularly in 1986), (2) an increasing number of anti-drug, and specifically anti-cocaine, "spots," and (3) the widely publicized deaths in 1986 of sports stars Len Bias and Don Rogers, attributed to cocaine. The death of the sports stars, we believe, helped to bring home the notions, first, that no one–regardless of age or physical condition–is invulnerable to being killed by cocaine, and second, that one does not have to be an addict or regular user to suffer such adverse consequences. Finally, the addictive potential of cocaine also was emphasized heavily in the media during that period, in large part due to the media frenzy over crack use.

As with marijuana, 1991 saw an end to the increase in the perceived risk of cocaine. Eighth graders' perceptions of cocaine risk began to decline at least as early as 1992, and by 1993 an appreciable decline in the perceived risks of crack and cocaine powder emerged among tenth and twelfth graders as well. The declines continued into 1994 among eighth and tenth graders, but not among twelfth graders. (See Table 19.) This significant reversal of beliefs has set the stage for a resurgence in use, particularly when one realizes that the proportions of students using two of the "gateway drugs"—cigarettes and marijuana—has risen already. Indeed, cocaine use has been drifting upward since 1991 in the case of eighth graders, and since 1992 in the case of tenth and twelfth graders.

- For most of the illicit drugs other than marijuana and cocaine, the period from 1975 to 1979 revealed a modest but consistent trend in the direction of fewer students associating much risk with experimental or occasional use of them (Table 20 and Figures 25a, 26a, 27a). Only for

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[32] See also Bachman, J.G., Johnston, L.D., & O'Malley, P.M. (1990). Explaining the recent decline in cocaine use among young adults: Further evidence that perceived risks and disapproval lead to reduced drug use. *Journal of Health and Social Behavior, 31*, 173-184. For a discussion of perceived risk in the larger set of factors influencing trends, and for a consideration of the forces likely to influence perceived risk, see also, Johnston, L.D. (1991). Toward a theory of drug epidemics. *In* R.L. Donohew, H. Sypher, & W. Bukoski (Eds.) *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

[33] Our belief in the importance of perceived risk of experimental and occasional use led us to include in 1986 for the first time the question about the dangers of occasional use.

amphetamines and ***barbiturates*** did this trend continue beyond 1979, until about 1982.

Over the next several years there was little change, although perceived risk of harm in experimental or occasional use of all the illicit drugs other than marijuana dropped slightly in 1985 and 1986. However, the perceived risk of experimental or occasional use increased for all drugs in 1987, reached a peak in 1990 or 1991, and began to decline significantly thereafter.

- In sum, between 1975 and 1979 there was a distinct decline in perceived harmfulness associated with use of all the illicit drugs. After 1979, concerns about regular ***marijuana*** use increased dramatically, and concerns about the use of marijuana at less frequent levels increased considerably. After 1986 there was a sharp increase in the risks associated with ***cocaine*** use–particularly at the experimental and occasional use levels–and some increase in perceived risk for virtually ***all of the other illicit drugs***, as well (Figures 25a, 26a, 27a). Since 1991, the trends have reversed and fewer seniors see use of these drugs as being dangerous.

- Particularly noteworthy has been the sharp decline in perceived risk for ***LSD*** in 1992 and 1993, confirming our concern that the attitudes of the newer generation of young people may not have been influenced by some of the direct and vicarious learning experiences which helped to make their predecessors more cautious about it (Figure 26a). In the late 1960s and early 1970s young people became aware of the risks of bad trips, uncontrollable flashbacks, dangerous behaviors under the influence, etc. Today's youngsters know much less about those risks.

- The risks associated with ***barbiturate*** use have fallen significantly since 1991, and with ***crystal methamphetamine*** (ice) since 1992. In 1994, however, these attitudes stabilized and may even have risen a bit.

- The perceived risk of ***PCP***, though very high relative to other drugs in 1988, fell back by seven percentage points from its peak level in 1988 (59%) to 1994 (52%).

- After showing little systematic change in the latter half of the 1970s, the perceived risks associated with ***alcohol use*** at various levels rose during the 1980s (though not as dramatically as the perceived risks associated with marijuana and cocaine). The proportions perceiving great risk of harm in having one or two drinks nearly every day rose from 20% in 1980 to 33% in 1991, but has decreased to 27% in 1994. The proportion perceiving great risk in having four or five drinks nearly every day rose slightly from 66% in 1980 to 71% in 1990, then remained fairly stable through 1992, and then declined (reaching 66% in 1994).

FIGURE 25a

Trends in Perceived Harmfulness of Amphetamine and Barbiturate Use for Twelfth Graders

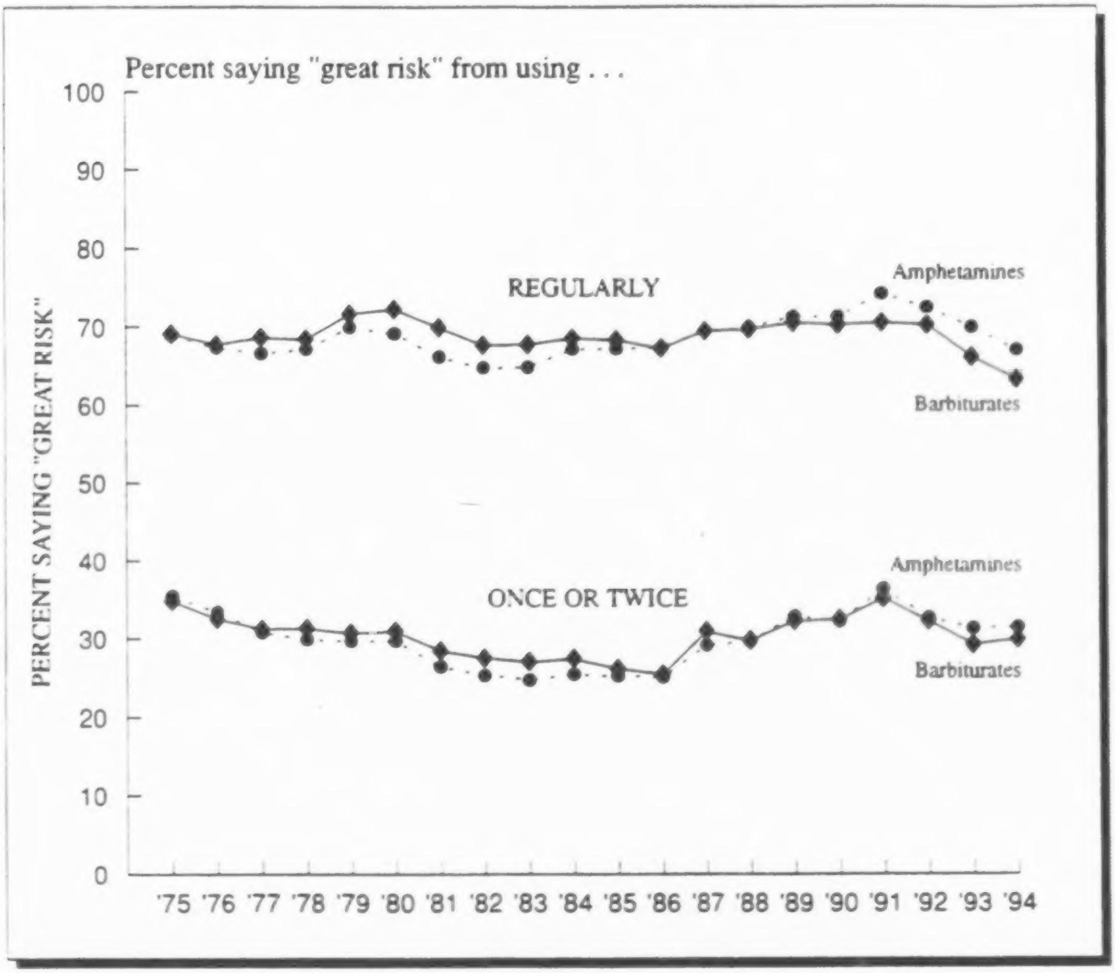


FIGURE 25b

Trends in Disapproval of Amphetamine and Barbiturate Use for Twelfth Graders

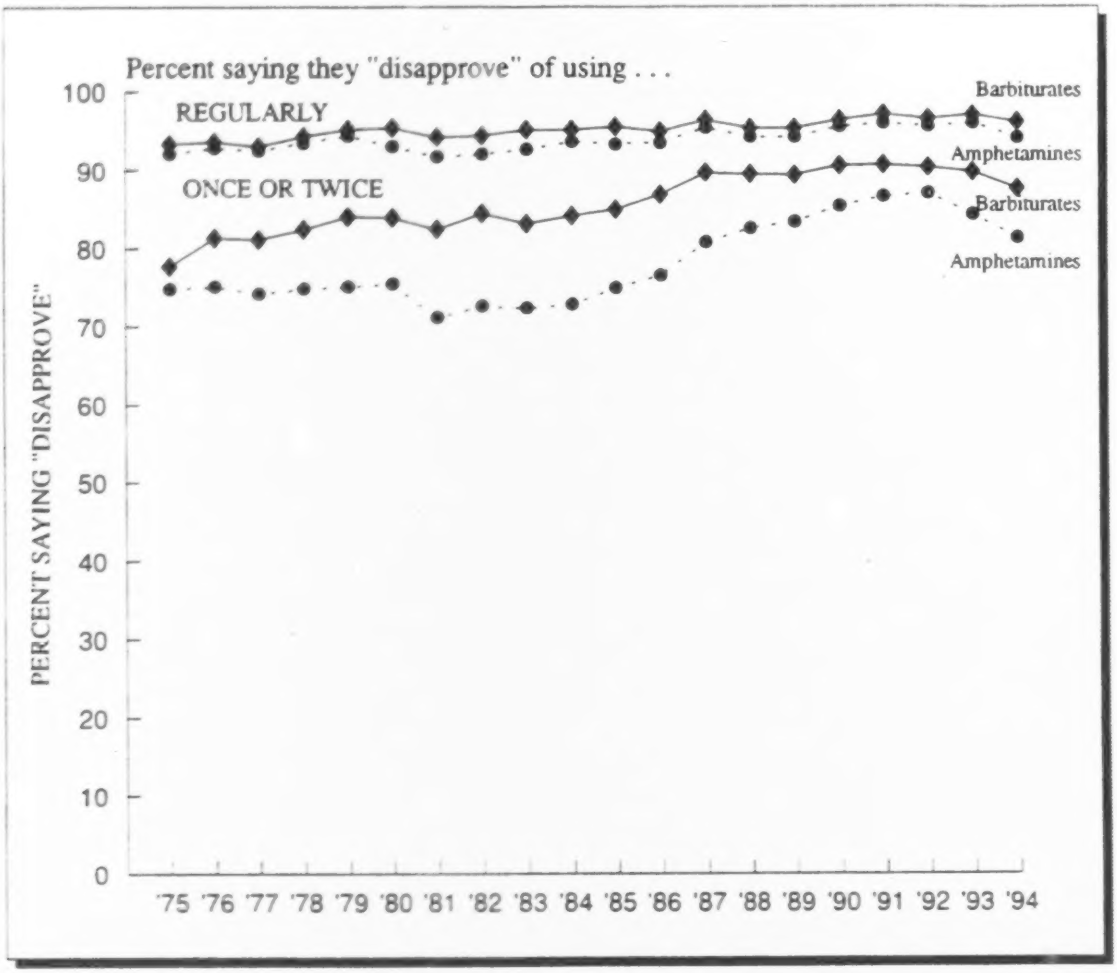


FIGURE 26a

Trends in Perceived Harmfulness of LSD Use for Twelfth Graders

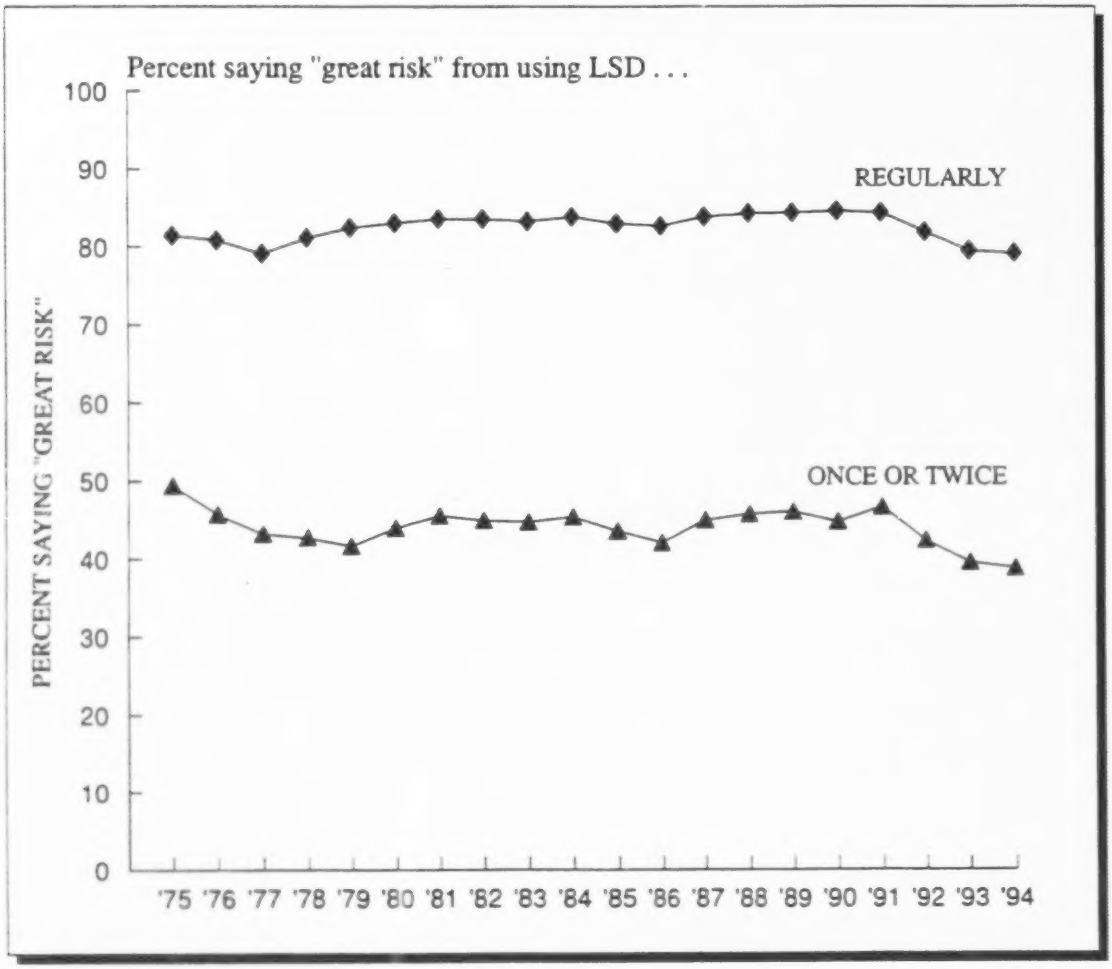


FIGURE 26b

Trends in Disapproval of LSD Use for Twelfth Graders

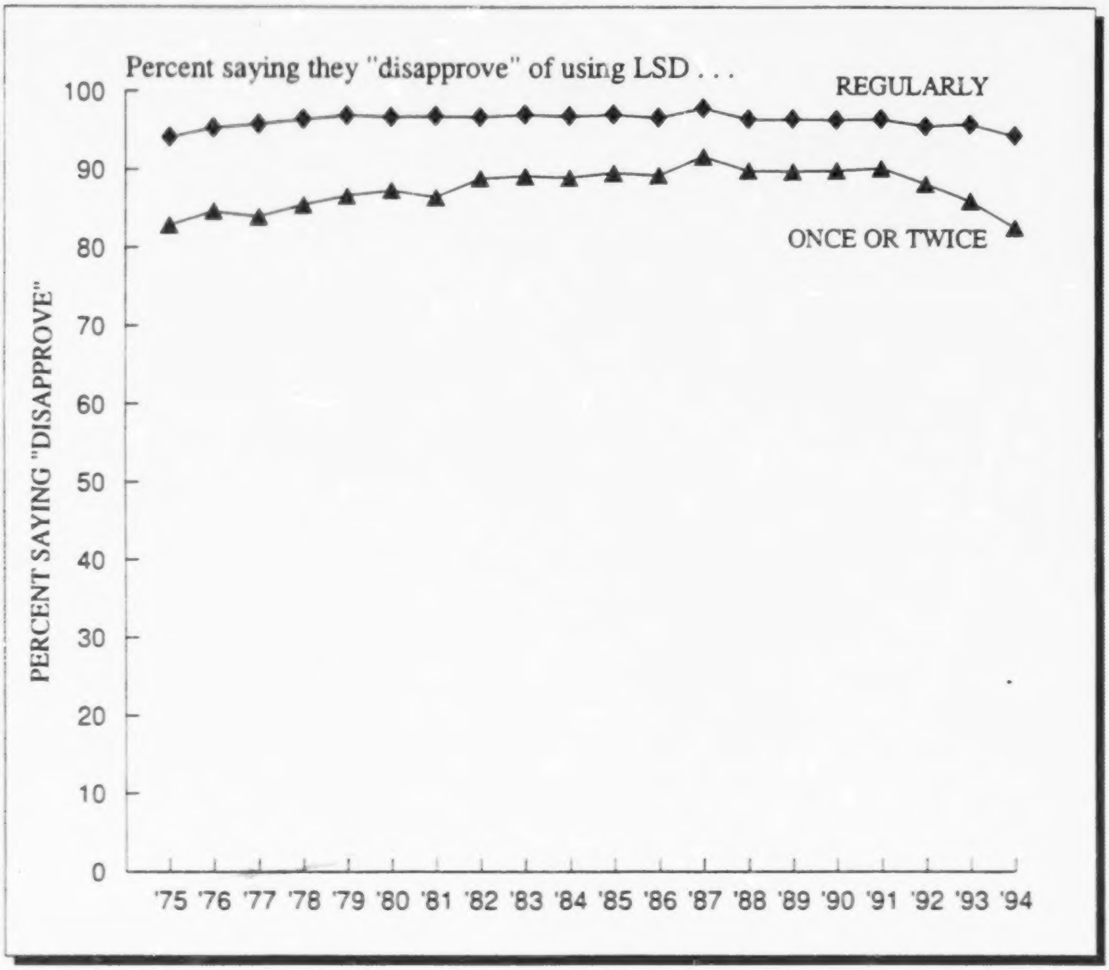


FIGURE 27a

Trends in Perceived Harmfulness of Heroin Use for Twelfth Graders

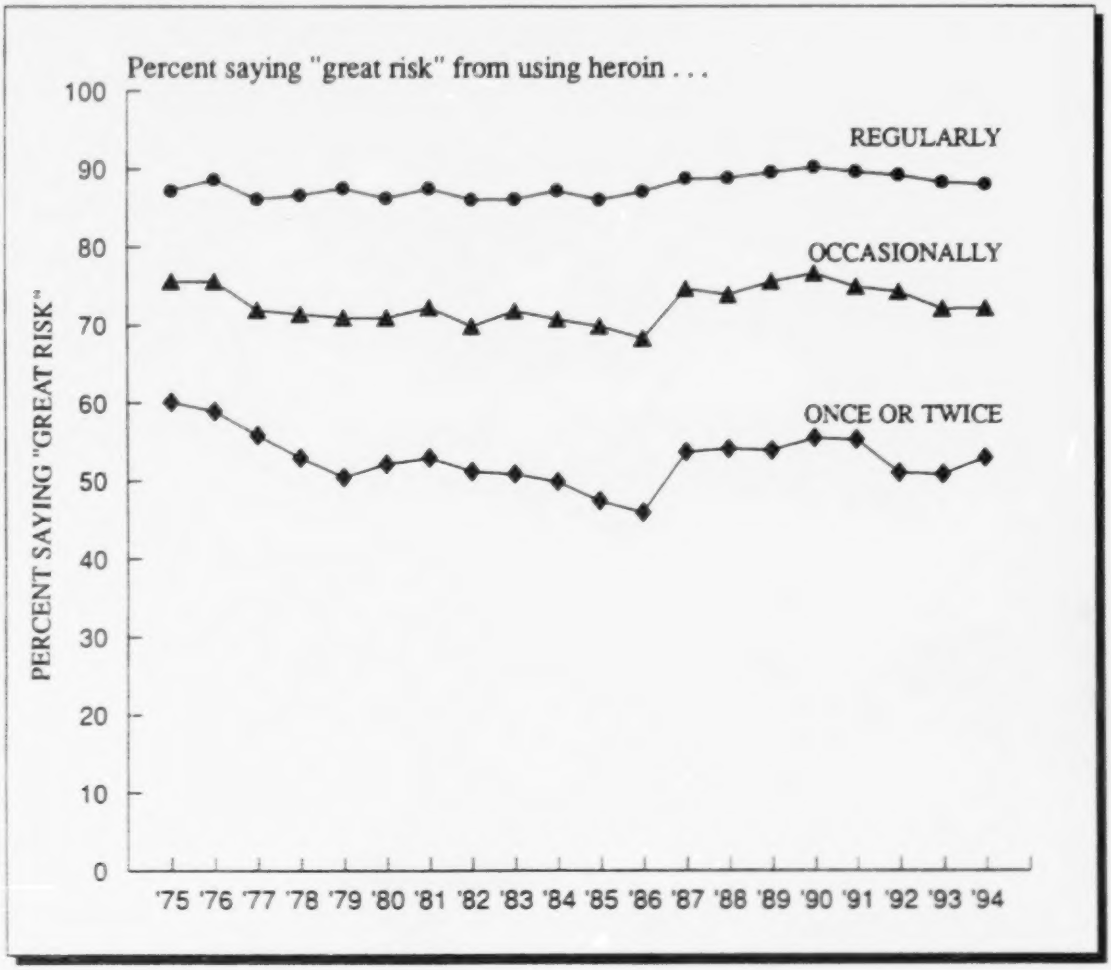
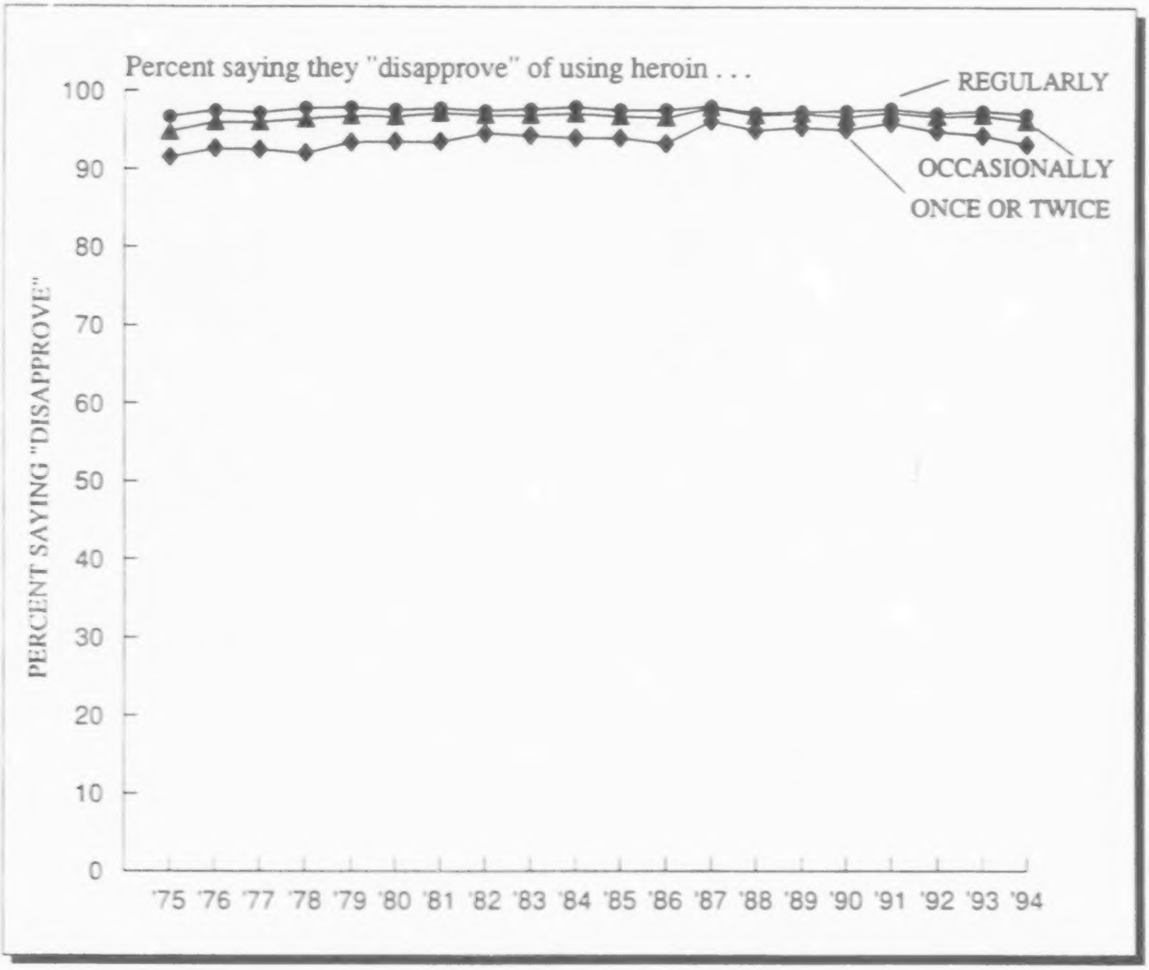


FIGURE 27b

Trends in Disapproval of Heroin Use for Twelfth Graders



The corresponding figures for ***occasional binge drinking*** (having five or more drinks once or twice a weekend) rose from 36% in 1980 to 49% in 1992 and has also decreased, to 47% by 1994. (Recall that the reported prevalence of occasional binge drinking declined, from 41% in 1980 to 28% in 1992, where it stabilized.) These increases in perceived risk tended to be followed by some declines in the actual behaviors, once again suggesting the importance of these beliefs in influencing behavior.

- Despite all that is known today about the health consequences of ***cigarette smoking***, about one-third (32%) of twelfth grade students still do not believe that there is a great risk in smoking a pack or more of cigarettes per day.

  Over a longer period, the number of seniors who thought ***pack-a-day cigarette smoking*** involved great risk to the user increased, from 51% in 1975 to 64% in 1980. This shift corresponded with, and to some degree preceded, the downturn in regular smoking found in this age group (compare Figures 9h and 29a). Between 1980 and 1984 this statistic showed no further increase, once again presaging the end of the decline in use. In the ten year interval since 1984, the percent of seniors perceiving great risk in regular smoking rose only about four percentage points.

  More of the younger children fail to recognize the risk associated with regular cigarette smoking. In 1994 perceived risk decreased slightly (not significantly) among eighth and tenth graders, and their smoking rates rose.

Trends in Perceived Harmfulness Among Eighth and Tenth Graders

- Data on perceived risk for eighth and tenth graders are not available for many of the drugs on which twelfth grade data are provided. However, for most of the illicit drugs about which they were asked, the eighth graders showed troublesome declines in perceived risk: ***crack***, ***cocaine powder***, and ***marijuana*** (see Table 19). Indeed, the decreases in the perceived risk of marijuana, which have been occurring at least since 1991 for eighth graders and since 1992 for tenth graders, became very sharp in 1994.

- Because we see perceived risk as a central cause of the decline in various forms of illicit drug use, as we noted previously, the softening in these beliefs was troublesome and could portend a reversal of the downward trends in illicit drug use. In 1994 ***marijuana, cocaine, crack,*** and ***other cocaine*** use rose significantly, and ***inhalant*** use increased slightly but not significantly.

FIGURE 28a

Trends in Perceived Harmfulness of Alcohol Use for Twelfth Graders

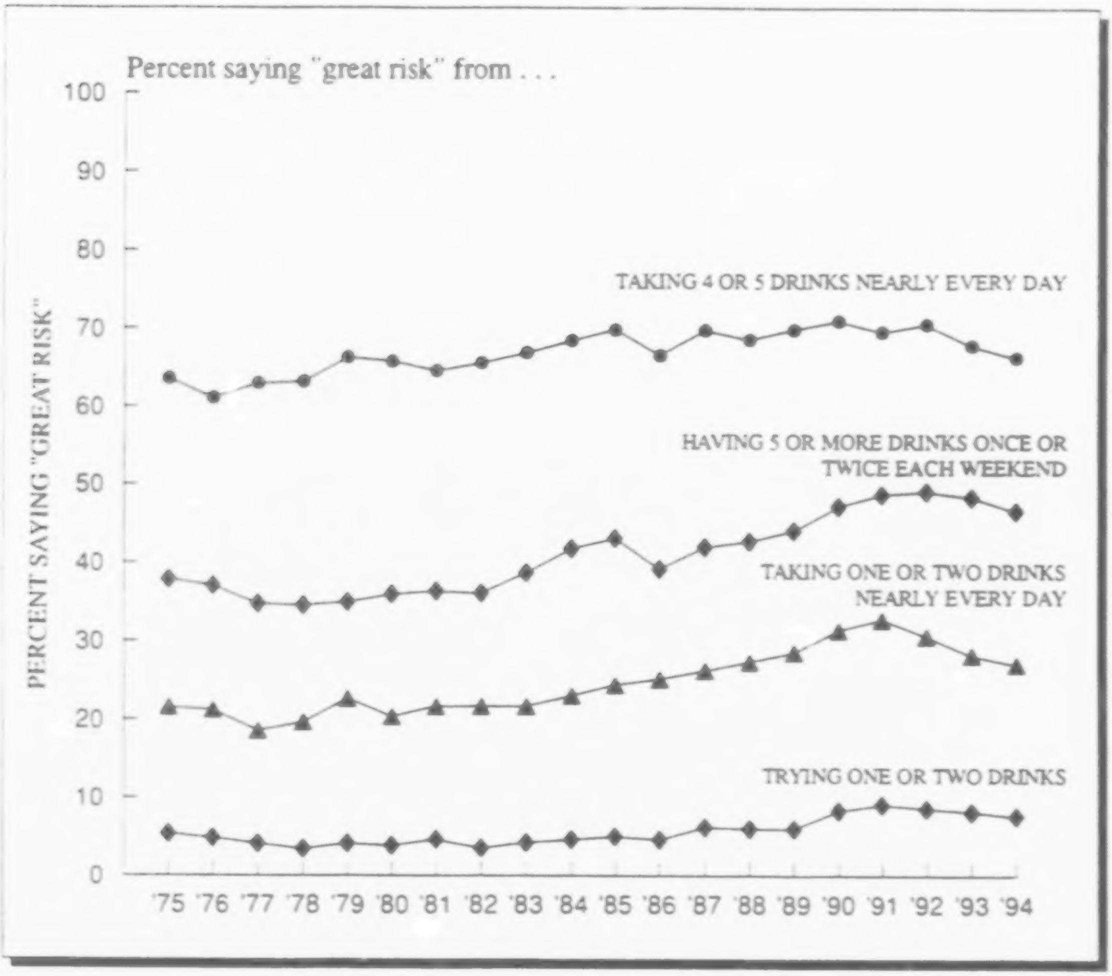


FIGURE 28b

Trends in Disapproval of Alcohol Use for Twelfth Graders

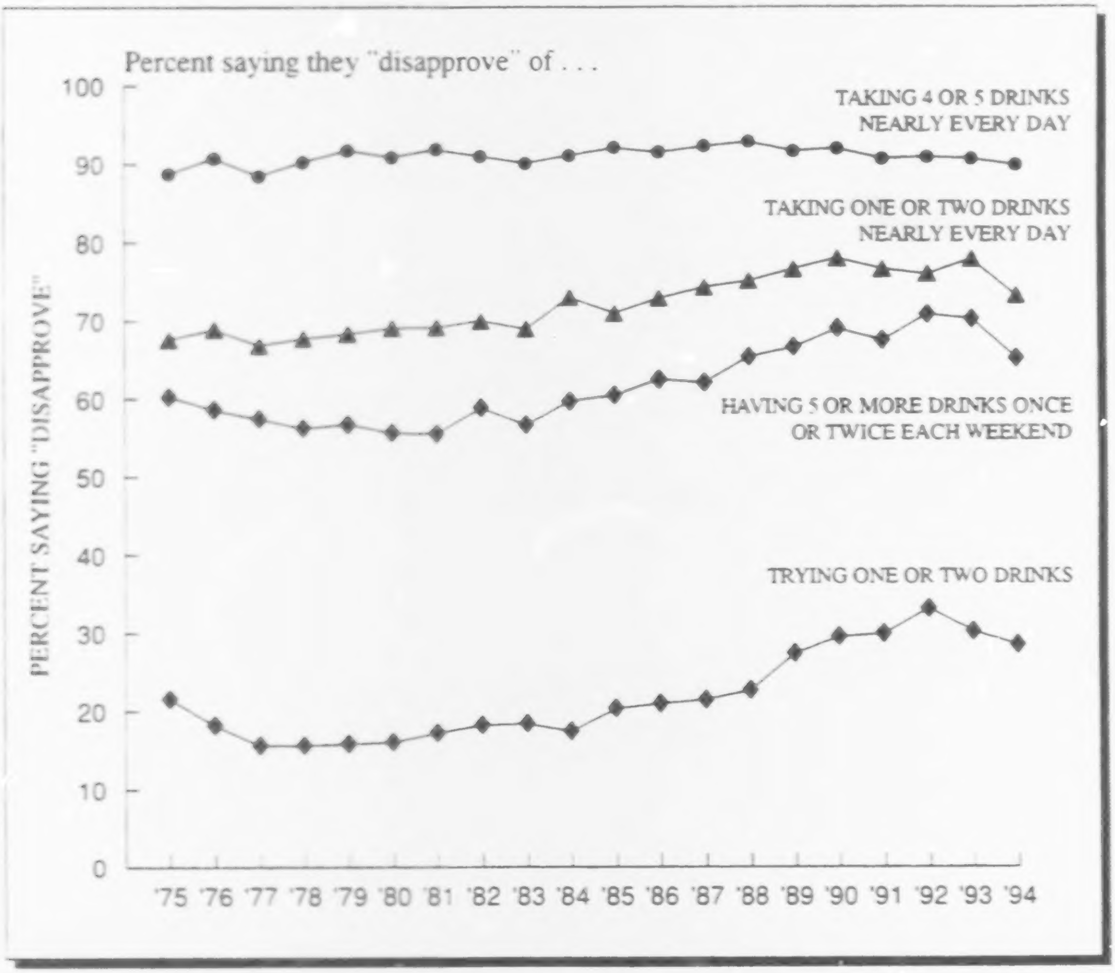


FIGURE 29a

Trends in Perceived Harmfulness of Smoking One or More Packs of Cigarettes per Day for Eighth, Tenth, and Twelfth Graders

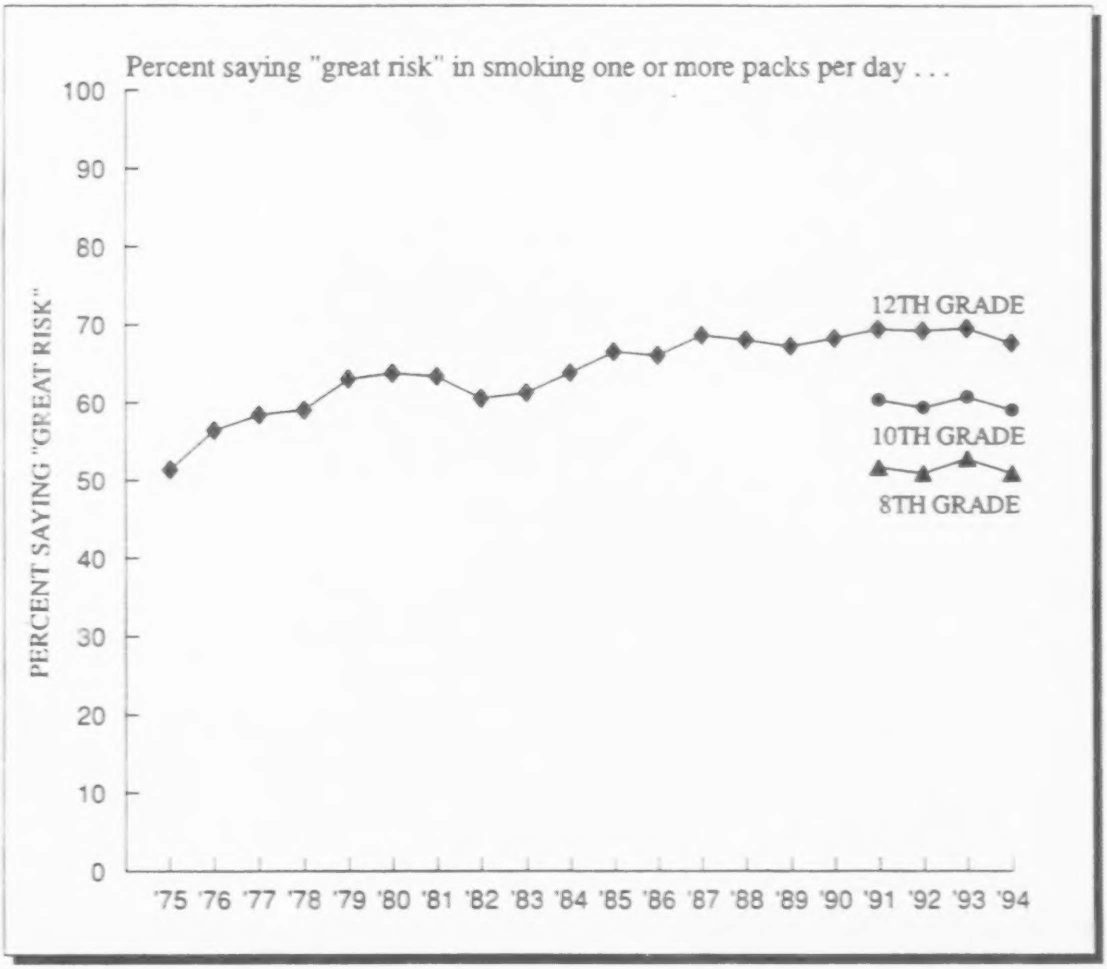
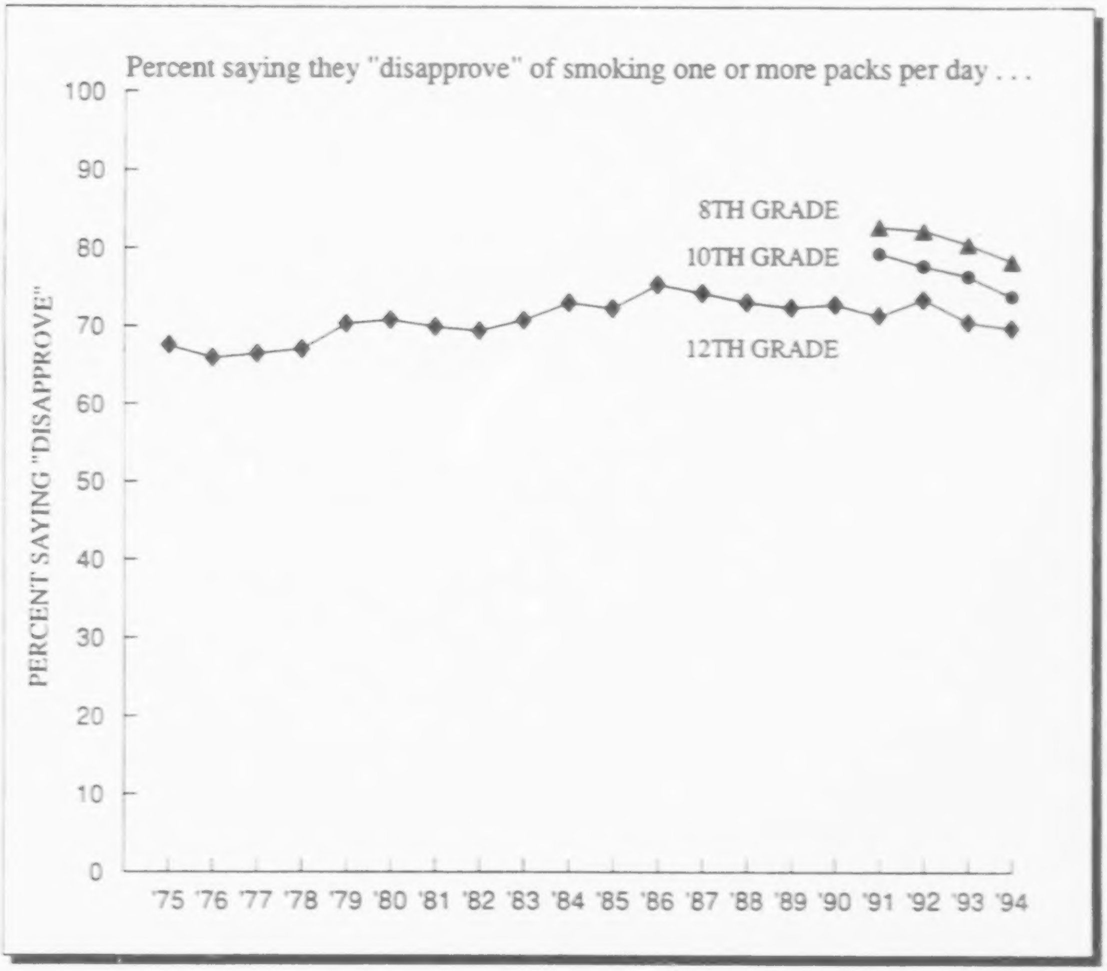


FIGURE 29b

Trends in Disapproval of Smoking One or More Packs of Cigarettes per Day for Eighth, Tenth, and Twelfth Graders



- By way of contrast, in 1994 the dangers perceived to be associated with ***inhalants*** rose, though the increases reached statistical significance only among the tenth graders. (Inhalant questions are not asked of twelfth graders.)

- For ***steroids***, in 1992, a noteworthy and constructive change occurred across all three grade levels. There were increases of between 5 and 6 percentage points across the three grade levels in respondents saying there is a "great risk" to the user in taking steroids. Between 70% and 73% of each grade level reported great risk. This suggested that the widely-publicized experience of professional football player, Lyle Alzado had an important effect on young people's beliefs about the damages of this drug. The effect this "unfortunate role model" had was very similar to that of Len Bias on beliefs about the dangers of cocaine, except that in Lyle Alzado's case he became aware of the health consequences of his drug use well before his death, and *intentionally* set about making his experience an object lesson for young people.[34] Unfortunately, this constructive development has not continued, and perceived risk has been slipping in the past year or two.

- The perceived risk of pack-a-day ***cigarette smoking*** peaked in 1993 for all three grade levels and showed a decline (not statistically significant) in 1994, again in all three grade levels.

PERSONAL DISAPPROVAL OF DRUG USE

At the beginning of the Monitoring the Future study we also introduced a set of questions to measure the moral sentiment respondents attach to various types of drug use. The phrasing, "Do you disapprove of people (who are 18 or older) doing each of the following" was adopted.

Extent of Disapproval Among Twelfth Graders

- The vast majority of seniors do not condone regular use of any of the illicit drugs (see Table 22). Even ***regular marijuana use*** is disapproved by 82%, and regular use of each of the other illicit drugs receives disapproval from between 93% and 97% of today's high school seniors.

- Fewer respondents indicate disapproval of experimental or occasional use than of regular use, for each of the drugs included in the question. However, the differences are not great for the illicit drugs other than

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[34] For a discussion of the importance of vicarious learning from unfortunate role models see Johnston, L.D. (1991). Toward a theory of drug epidemics. *In* R.L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 133-156). Hillsdale, NJ: Lawrence Erlbaum.

TABLE 21

Trends in Disapproval of Drug Use by Eighth, Tenth, and Twelfth Graders, 1991-1994

Q. Do you disapprove of people who . . .	Percent who "disapprove" or "strongly disapprove"[a]														
	8th Grade					10th Grade					12th Grade[b]				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change
Try marijuana once or twice	84.6	82.1	79.2	72.9	-6.3sss	74.6	74.8	70.3	62.4	-7.9sss	68.7	69.9	63.3	57.6	-5.7ss
Smoke marijuana occasionally	89.5	88.1	85.7	80.9	-4.8sss	83.7	83.6	79.4	72.3	-7.1sss	79.4	79.7	75.5	68.9	-6.6sss
Smoke marijuana regularly	92.1	90.8	88.9	85.3	-3.6sss	90.4	90.0	87.4	82.2	-5.2sss	89.3	90.1	87.6	82.3	-5.3sss
Try inhalants once or twice	84.9	84.0	82.5	81.6	-0.9	85.2	85.6	84.8	84.9	+0.1	—	—	—	—	—
Take inhalants regularly	90.6	90.0	88.9	88.1	-0.8	91.0	91.5	90.9	91.0	+0.1	—	—	—	—	—
Try LSD once or twice[c]	—	—	77.1	75.2	-1.9	—	—	82.1	79.3	-2.8ss	90.1	88.1	85.9	82.5	-3.4ss
Take LSD regularly[c]	—	—	79.8	78.4	-1.4	—	—	86.8	85.6	-1.2	96.4	95.5	95.8	94.3	-1.5s
Try crack once or twice	91.7	90.7	89.1	86.9	-2.2sss	92.5	92.5	91.4	89.9	-1.5s	92.1	93.1	89.9	89.5	-0.4
Take crack occasionally	93.3	92.5	91.7	89.9	-1.8sss	94.3	94.4	93.6	92.5	-1.1s	94.2	95.0	92.8	92.8	0.0
Try cocaine powder once or twice	91.2	89.6	88.5	86.1	-2.4sss	90.8	91.1	90.0	88.1	-1.9ss	88.0	89.4	86.6	87.1	+0.5
Take cocaine powder occasionally	93.1	92.4	91.6	89.7	-1.9sss	94.0	94.0	93.2	92.1	-1.1s	93.0	93.4	91.2	91.0	-0.2
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	51.7	52.2	50.9	47.8	-3.1s	37.6	39.9	38.5	36.5	-2.0s	29.8	33.0	30.1	28.4	-1.7
Take one or two drinks nearly every day	82.2	81.0	79.6	76.7	-2.9ss	81.7	81.7	78.6	75.2	-3.4ss	76.5	75.9	77.8	73.1	-4.7ss
Have five or more drinks once or twice each weekend	85.2	83.9	83.3	80.7	-2.6ss	76.7	77.6	74.7	72.3	-2.4s	67.4	70.7	70.1	65.1	-5.0ss
Smoke one or more packs of cigarettes per day	82.8	82.3	80.6	78.4	-2.2ss	79.4	77.8	76.5	73.9	-2.6ss	71.4	73.5	70.6	69.8	-0.8
Use smokeless tobacco regularly	79.1	77.2	77.1	75.1	-2.0s	75.4	74.6	73.8	71.2	-2.6ss	—	—	—	—	—
Take steroids[d]	89.8	90.3	89.9	87.9	-2.0s	90.0	91.0	91.2	90.8	-0.4	90.5	92.1	92.1	91.9	-0.2
Approx. N =	*17390*	*18503*	*18435*	*17429*		*14750*	*14774*	*15334*	*15891*		*2547*	*2645*	*2723*	*2588*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, (3) Strongly disapprove. For 8th and 10th grades, there was another category—"Can't say, drug unfamiliar"—which was included in the calculation of these percentages.

[b] The twelfth grade questions ask about people who are 18 or older. Data based on one of six questionnaire forms in 1994.

[c] 8th and 10th grade: Data based on a single questionnaire form, N is one-half of N indicated.

[d] 8th and 10th grade: Data based on two questionnaire forms in 1991 and 1992; data based on a single questionnaire form in 1993 and 1994, N is one-half of N indicated.

TABLE 22
Long-Term Trends in Disapproval of Drug Use by Twelfth Graders

Q. *Do you disapprove of people (who are 18 or older) doing each of the following?*[b]	Percentage "disapproving"[a]																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Try marijuana once or twice	47.0	38.4	33.4	33.4	34.2	39.0	40.0	45.5	46.3	49.3	51.4	54.6	56.6	60.8	64.6	67.8	68.7	69.9	63.3	57.6	-5.7ss
Smoke marijuana occasionally	54.8	47.8	44.3	43.5	45.3	49.7	52.6	59.1	60.7	63.5	65.8	69.0	71.6	74.0	77.2	80.5	79.4	79.7	75.5	68.9	-6.6sss
Smoke marijuana regularly	71.9	69.5	65.5	67.5	69.2	74.6	77.4	80.6	82.5	84.7	85.5	86.6	89.2	89.3	89.8	91.0	89.3	90.1	87.6	82.3	-5.3sss
Try LSD once or twice	82.8	84.6	83.9	85.4	86.6	87.3	86.4	88.8	89.1	88.9	89.5	89.2	91.6	89.8	89.7	89.8	90.1	88.1	85.9	82.5	-3.4ss
Take LSD regularly	94.1	95.3	95.8	96.4	96.9	96.7	96.8	96.7	97.0	96.8	97.0	96.6	97.8	96.4	96.4	96.3	96.4	95.5	95.8	94.3	-1.5s
Try cocaine once or twice	81.3	82.4	79.1	77.0	74.7	76.3	74.6	76.6	77.0	79.7	79.3	80.2	87.3	89.1	90.5	91.5	93.6	93.0	92.7	91.6	-1.1
Take cocaine regularly	93.3	93.9	92.1	91.9	90.8	91.1	90.7	91.5	93.2	94.5	93.8	94.3	96.7	96.2	96.4	96.7	97.3	96.9	97.5	96.6	-0.9
Try crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92.3	92.1	93.1	89.9	89.5	-0.4
Take crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.3	94.2	95.0	92.8	92.8	0.0
Take crack regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.9	95.0	95.5	93.4	93.1	-0.3
Try coke powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.9	88.0	89.4	86.6	87.1	+0.5
Take coke powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92.1	93.0	93.4	91.2	91.0	-0.2
Take coke powder regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.7	94.4	94.3	93.0	92.5	-0.5
Try heroin once or twice	91.5	92.6	92.5	92.0	93.4	93.5	93.5	94.6	94.3	94.0	94.0	93.3	96.2	95.0	95.4	95.1	96.0	94.9	94.4	93.2	-1.2
Take heroin occasionally	94.8	96.0	96.0	96.4	96.8	96.7	97.2	96.9	96.9	97.1	96.8	96.6	97.9	96.9	97.2	96.7	97.3	96.8	97.0	96.2	-0.8
Take heroin regularly	96.7	97.5	97.2	97.8	97.9	97.6	97.8	97.5	97.7	98.0	97.6	97.6	98.1	97.2	97.4	97.5	97.8	97.2	97.5	97.1	-0.4
Try amphetamines once or twice	74.8	75.1	74.2	74.8	75.1	75.4	71.1	72.6	72.3	72.8	74.9	76.5	80.7	82.5	83.3	85.3	86.5	86.9	84.2	81.3	-2.9s
Take amphetamines regularly	92.1	92.8	92.5	93.5	94.4	93.0	91.7	92.0	92.6	93.6	93.3	93.5	95.4	94.2	94.2	95.5	96.0	95.6	96.0	94.1	-1.9s
Try barbiturates once or twice	77.7	81.3	81.1	82.4	84.0	83.9	82.4	84.4	83.1	84.1	84.9	86.8	89.6	89.4	89.3	90.5	90.6	90.3	89.7	87.5	-2.2s
Take barbiturates regularly	93.3	93.6	93.0	94.3	95.2	95.4	94.2	94.4	95.1	95.1	95.5	94.9	96.4	95.3	95.3	96.4	97.1	96.5	97.0	96.1	-0.9
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	21.6	18.2	15.6	15.6	15.8	16.0	17.2	18.2	18.4	17.4	20.3	20.9	21.4	22.6	27.3	29.4	29.8	33.0	30.1	28.4	-1.7
Take one or two drinks nearly every day	67.6	68.9	66.8	67.7	68.3	69.0	69.1	69.9	68.9	72.9	70.9	72.8	74.2	75.0	76.5	77.9	76.5	75.9	77.8	73.1	-4.7ss
Take four or five drinks nearly every day	88.7	90.7	88.4	90.2	91.7	90.8	91.8	90.9	90.0	91.0	92.0	91.4	92.2	92.8	91.6	91.9	90.6	90.8	90.6	89.8	-0.8
Have five or more drinks once or twice each weekend	60.3	58.6	57.4	56.2	56.7	55.6	55.5	58.8	56.6	59.6	60.4	62.4	62.0	65.3	66.5	68.9	67.4	70.7	70.1	65.1	-5.0ss
Smoke one or more packs of cigarettes per day	67.5	65.9	66.4	67.0	70.3	70.8	69.9	69.4	70.8	73.0	72.3	75.4	74.3	73.1	72.4	72.8	71.4	73.5	70.6	69.8	-0.8
Take steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.8	90.5	92.1	92.1	91.9	-0.2
Approx. N =	*2677*	*2957*	*3085*	*3686*	*3221*	*3261*	*3610*	*3651*	*3341*	*3254*	*3265*	*3113*	*3302*	*3311*	*2799*	*2566*	*2547*	*2645*	*2723*	*2588*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.
[b] The 1975 question asked about people who are "20 or older."

marijuana, because nearly all seniors disapprove even experimenting with them. For example, 83% disapprove experimenting with ***LSD***, 92% with ***cocaine***, and 93% with ***heroin***.

- For ***marijuana***, the rate of disapproval varies substantially for different usage habits, although not as much as it did in the past. Some 58% disapprove of trying it versus 82% who disapprove of regular use.

- Smoking a pack (or more) of ***cigarettes*** per day receives the disapproval of 70% of the age group.

- Taking ***one or two drinks daily*** is disapproved by 73% of the seniors. Curiously, ***weekend binge drinking*** (five or more drinks once or twice each weekend) is acceptable to more seniors than is having one or two drinks daily. Only 65% disapprove of having five or more drinks once or twice a weekend despite the fact that more seniors associate great risk with weekend binge drinking (47%) than with having one or two drinks daily (27%).

  One likely explanation for these anomalous findings may be that a greater proportion of this age group are themselves weekend binge drinkers rather than moderate daily drinkers. Therefore, they may express attitudes accepting of their own behavior, even though such attitudes may be somewhat inconsistent with their beliefs about possible consequences. It also may be that the ubiquitous advertising of alcohol use in "partying" situations has managed to increase acceptability from what it would be in the absence of such advertising.

Extent of Disapproval Among Eighth and Tenth Graders

- The eighth graders are now least likely to disapprove of ***crack cocaine*** and ***cocaine powder*** use, reflecting their more rapid decline in disapproval since 1991.

- They are also least likely to see ***steroid*** use as dangerous, though the differences are not large.

- Attitudes about ***inhalant*** use have been asked only of the eighth and tenth grade students; 82% and 85%, respectively, say they disapprove of trying them.

- ***Marijuana*** shows the greatest age-related difference in disapproval rates. The rates of disapproval of marijuana use increase as one moves down in grade level. To illustrate, 58% of twelfth graders disapprove of trying marijuana vs. 62% of tenth graders and 73% of eighth graders. There may, of course, be some tendency for these attitudes to shift with age, but it is also possible that these differences reflect some important differences between class cohorts.

- Disapproval of ***alcohol*** use also increases as one moves down in grade level. For example, only 65% of the seniors disapprove of weekend binge drinking vs. 72% of the tenth graders and 81% of the eighth graders. Because of the shifts in the minimum drinking ages in a number of states, we think it quite possible that a cohort shift in attitudes about drinking had been taking place, since for the younger cohorts teenage drinking has been illegal for a greater proportion of their lives.

- Similarly, for ***cigarette*** use, 70% of seniors, 74% of tenth graders, and 78% of eighth graders disapprove of smoking one or more packs per day. Oddly enough, the eighth graders, who are least likely to see regular smoking as dangerous, are the most likely to disapprove of it.

TRENDS IN DISAPPROVAL OF DRUG USE

Trends in Disapproval Among Twelfth Graders

- Between 1975 and 1977 a substantial decrease occurred in disapproval of ***marijuana*** use at any level of frequency (see Table 22, and Figure 21b). About 14% fewer seniors in the class of 1977 (compared with the class of 1975) disapproved of experimenting, 11% fewer disapproved of occasional use, and 6% fewer disapproved of regular use. These undoubtedly were continuations of longer-term trends which began in the late 1960s, as the norms of American young people against illicit drug use were seriously eroded. Between 1977 and 1990, however, there was a very substantial reversal of that trend when disapproval of experimental marijuana use rose by 34 percentage points, disapproval of occasional use by 36 percentage points, and disapproval of regular use by 26 percentage points. There were no further significant changes in 1991 or 1992, although disapproval of experimental use continued to rise. Beginning in 1993, a sharp drop in disapproval of marijuana use emerged. Between 1992 and 1994 disapproval dropped 12 percentage points for experimental use, 11 percentage points for occasional use, and 8 percentage points for regular use. This change, which accelerated in 1994, accompanied a significant increase in actual use.

- Until 1980 the proportion of seniors who disapproved of trying ***amphetamines*** had remained extremely stable (at 75%). This proportion dropped some in 1981 (to 71%), increased thereafter to reach 87% in 1991, where it remained in 1992. In 1993 a reversal began and disapproval dropped by nearly 3%, at the same time actual use increased. In 1994 disapproval again dropped significantly by 3% to 81%.

- During the late 1970s, personal disapproval of experimenting with ***barbiturates*** increased (from 78% in 1975 to 84% in 1979) and remained relatively stable through 1984, when it began to increase again. By 1990 disapproval had reached 91% and then changed little until 1994, when the disapproval rate dropped significantly to 88%.

- Concurrent with the years of increase in actual ***cocaine*** use, disapproval of experimental use of cocaine declined somewhat, from a high of 82% in 1976 down to 75% in 1979 (Figure 22b). It then leveled for four years, edged upward for a couple of years to about 80% in 1986, and since then has risen significantly so that 92% of seniors now disapprove of trying cocaine. Disapproval of both ***cocaine powder*** and ***crack cocaine*** peaked in 1992, and there has been some modest fall-off since then.

- We believe that the parallel trends between perceived risk and disapproval–particularly for marijuana and cocaine–are no accident. We hypothesize that perceived risk is an important influence on an individual's level of disapproval of a drug-using behavior, though there surely are other influences, as well. As levels of personal disapproval change, these individually held attitudes are communicated among friends and acquaintances, and perceived norms also change (as will be illustrated in the next chapter). It is noteworthy that as perceived risk for most of the illicit drugs began to reverse by 1991 or 1992, personal disapproval for virtually all of them appeared to level. In 1993, personal disapproval among seniors began to drop for nearly all of the illicit drugs (see Tables 20 and 22) and continued to fall in 1994.

- Despite the large changes which seem to have taken place among adults, disapproval of ***regular cigarette smoking*** (a pack or more per day) has changed surprisingly little throughout this study. Disapproval increased from 68% to 71% between 1975 and 1980. Disapproval rates fluctuated slightly throughout the 1980s and early 1990s, never exceeding 75%. In 1994 the disapproval rate is 70%. This lack of change is surprising because so many anti-smoking laws and policies have been enacted. Very likely, the promotion and advertising efforts of the tobacco industry help to account for this lack of change in disapproval. It is worth noting that the disapproval rates among eighth and tenth graders have fallen steadily the last three years. Among seniors, the decline goes back two years, and the rate among seniors in 1994 is the lowest since 1982 (Table 22).

- Disapproval of weekend ***binge drinking*** rose gradually, from 56% in 1980 to a high of 71% in 1992. In 1994 disapproval dropped significantly to 65%. The proportion of seniors who disapproved of even ***trying alcohol*** doubled, from a low point of 16% in 1980 to 33% in 1992, before falling back to 28% in 1994. It seems likely that the increased minimum drinking age in many states, which occurred primarily between 1981 and 1987, contributed to these changes in attitude about abstention, since more recent senior classes grew up under the higher minimum drinking age. If so, this illustrates the considerable capacity of laws to influence informal norms.

Trends in Disapproval Among Eighth and Tenth Graders

Table 21 provides three-year trends (1991-1994) in disapproval for the eighth and tenth grade levels.

- In 1992 tenth and twelfth grade students showed little change in disapproval of the illicit drugs, but eighth graders showed some erosion in these attitudes with respect to ***marijuana, cocaine powder***, and ***crack***. In 1993, rates of disapproval for these drugs continued to decline among eighth graders and began to decline among tenth and twelfth graders as well (Table 21). In 1994 disapproval of ***marijuana*** use declined significantly in all three grade levels, disapproval of ***LSD*** fell in all three grade levels, and among eighth and tenth graders disapproval of the use of ***crack*** and ***cocaine powder*** fell significantly.

- The declines in personal disapproval have been particularly sharp for ***marijuana*** at all three grade levels.

- The softening in attitudes about ***cocaine powder*** and ***crack*** eventually translated into a change in usage levels. In 1994 use of these drugs was up in all grades, some significantly.

- Regarding ***inhalants***, there has been only a little slippage in the disapproval rates among eighth graders since 1991, and none among tenth graders.

- Disapproval of weekend ***binge drinking*** has declined significantly among eighth and tenth graders since 1991, and among twelfth graders since 1993.

- Disapproval of ***cigarette smoking*** has also declined significantly since 1991 among eighth and tenth graders, and since 1992 among twelfth graders.

ATTITUDES REGARDING THE LEGALITY OF DRUG USE

At the beginning of the study, legal restraints on drug use appeared likely to be in a state of flux for some time; therefore, we decided to measure attitudes about legal sanctions. As it turns out, some dramatic changes in these attitudes have occurred during the life of the study. Table 23 presents a set of questions on this subject along with the answers provided by each senior class. The set lists a sampling of illicit and licit drugs and asks respondents whether their use should be prohibited by law. A distinction is consistently made between use in public and use in private–a distinction which proved quite important in the results. (These questions have not been asked of the eighth and tenth grade respondents.)

Attitudes of Twelfth Graders

- The great majority of seniors believe that the use in public of ***illicit drugs other than marijuana*** should be prohibited by law. For instance, in the case of ***amphetamines*** or ***barbiturates***, 76% of the seniors believed that use should be prohibited, and 83% believe ***heroin*** should be prohibited.

- The great majority of seniors (73%) also favor legally prohibiting ***marijuana*** use in public places, despite the fact that more than one-third have used marijuana themselves, and despite the fact that many do not judge it to be as dangerous as other drugs. Considerably fewer (43%) feel that marijuana use in private should be prohibited.

- Some 47% of twelfth graders believe that ***cigarette*** smoking in public places should be prohibited by law. Slightly more think ***getting drunk*** in such places should be prohibited (54%).

- For ***all drugs***, fewer seniors believe that use in private settings should be illegal. This is particularly true for alcohol and marijuana.

Trends in These Attitudes Among Twelfth Graders

- From 1975 through 1977 there was a modest decline (shifts of 4 to 7 percentage points, depending on the substance) in the proportion of seniors who favored legal prohibition of private use of ***any of the illicit drugs***. By 1990, all of these proportions had increased substantially (shifts of 6 to 25 percentage points). Since 1990, positions on prohibition of all the illicit drugs have softened again, but particularly in the case of marijuana.

TABLE 23

Trends in Twelfth Graders' Attitudes Regarding Legality of Drug Use

Q Do you think that people (who are 18 or older) should be prohibited by law from doing each of the following?[b]	Percent saying "yes"[a]																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93-'94 change
Smoke marijuana in private	32.8	27.5	26.8	25.4	28.0	28.9	35.4	36.6	37.8	41.6	44.7	43.8	47.6	51.8	51.5	56.0	51.6	52.4	48.0	42.9	-5.1ss
Smoke marijuana in public places	63.1	59.1	58.7	59.5	61.8	66.1	67.4	72.8	73.6	75.2	78.2	78.9	79.7	81.3	80.0	81.9	79.8	78.3	77.3	72.5	-4.8ss
Take LSD in private	67.2	65.1	63.3	62.7	62.4	65.8	62.6	67.1	66.7	67.9	70.6	69.0	70.8	71.5	71.6	72.9	68.1	67.2	63.5	63.2	-0.3
Take LSD in public places	85.8	81.9	79.3	80.7	81.5	82.8	80.7	82.1	82.8	82.4	84.8	84.9	85.2	86.0	84.4	84.9	83.9	82.2	82.1	80.5	-1.6
Take heroin in private	76.3	72.4	69.2	68.8	68.5	70.3	68.8	69.3	69.7	69.8	73.3	71.7	75.0	74.2	74.4	76.4	72.8	71.4	70.7	70.1	-0.6
Take heroin in public places	90.1	84.8	81.0	82.5	84.0	83.8	82.4	82.5	83.7	83.4	85.8	85.0	86.2	86.6	85.2	86.7	85.4	83.3	84.5	82.9	-1.6
Take amphetamines or barbiturates in private	57.2	53.5	52.8	52.2	53.4	54.1	52.0	53.5	52.8	54.4	56.3	56.8	59.1	60.2	61.1	64.5	59.7	60.5	57.4	55.7	-1.7
Take amphetamines or barbiturates in public places	79.6	76.1	73.7	75.8	77.3	76.1	74.2	75.5	76.7	76.8	78.3	79.1	79.8	80.2	79.2	81.6	79.7	78.5	78.0	76.4	-1.6
Get drunk in private	14.1	15.6	18.6	17.4	16.8	16.7	19.6	19.4	19.9	19.7	19.8	18.5	18.6	19.2	20.2	23.0	22.0	24.4	22.1	21.0	-1.1
Get drunk in public places	55.7	50.7	49.0	50.3	50.4	48.3	49.1	50.7	52.2	51.1	53.1	52.2	53.2	53.8	52.6	54.6	54.3	54.1	53.6	54.3	+0.7
Smoke cigarettes in certain specified public places	NA	NA	42.0	42.2	43.1	42.8	43.0	42.0	40.5	39.2	42.8	45.1	44.4	48.4	44.5	47.3	44.9	47.6	45.9	47.3	+1.4
Approx. N =	*2620*	*2959*	*3113*	*3783*	*3288*	*3224*	*3611*	*3627*	*3315*	*3236*	*3254*	*3074*	*3332*	*3288*	*2813*	*2571*	*2512*	*2671*	*2759*	*2603*	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) No, (2) Not sure, and (3) Yes.

[b] The 1975 question asked about people who are "20 or older."

- Over the thirteen year interval, from 1977 to 1990, there was an appreciable rise in the proportion favoring legal prohibition of ***marijuana*** use, either in private (up from 27% to 56%) or in public (up from 59% to 82%). However, beginning in 1991 these proportions began to decline, and in 1994 seniors favoring prohibitions on marijuana use in public fell to 73%, and on private use to 43%.

- There has been rather little change in the proportion of seniors who say ***smoking cigarettes*** "in certain specified public places" should be prohibited by law. In 1977 some 42% held this view vs. 43% in 1985, and 47% in 1994. Were the question more specific as to the places in which smoking might be prohibited (e.g., hospitals, restaurants, etc.) different results might emerge.

- Preferences about the illegality of ***drunkenness*** in public or private places has changed little, but that small change has been toward less tolerance of these behaviors. The stability of attitudes about the preferred legality for this culturally ingrained drug-using behavior contrasts sharply with the lability of preferences regarding the legality of the illicit drugs.

THE LEGAL STATUS OF MARIJUANA

Another set of questions asks in more detail about what legal sanctions, if any, seniors think should be attached to the use and sale of marijuana. Respondents also are asked to guess how they would be likely to react to legalized use and sale of the drug. The answers to such a hypothetical question must be interpreted cautiously, of course.

Attitudes and Predicted Responses to Legalization

- As shown in Table 24, in 1994 less than half (39%) of all seniors believe that marijuana use should be treated as a crime. More than one-quarter think it should be entirely legal (27%), about another one-fifth (19%) feel it should be treated as a minor violation–like a parking ticket–but not as a crime. Another 15% indicate no opinion.

- Asked whether they thought it should be legal to sell marijuana if it were legal to use it, about half (53%) said "yes." However, nearly all of these respondents (42% of all respondents) would permit sale *only* to adults.

- High school seniors predict that they would be little affected personally by the legalization of either the sale or the use of marijuana. Two-thirds (65%) of the respondents say that they would not use the drug even if it were legal to buy and use, and another 16% indicate they would use it about as often as they do now, or less. Only 5% say they

TABLE 24

Trends in Twelfth Graders' Attitudes Regarding Marijuana Laws

(Entries are percentages)

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Q. *There has been a great deal of public debate about whether marijuana use should be legal. Which of the following policies would you favor?*																				
Using marijuana should be entirely legal	27.3	32.6	33.6	32.9	32.1	26.3	23.1	20.0	18.9	18.6	16.6	14.9	15.4	15.1	16.6	15.9	18.0	18.7	22.8	26.8
It should be a minor violation like a parking ticket but not a crime	25.3	29.0	31.4	30.2	30.1	30.9	29.3	28.2	26.3	23.6	25.7	25.9	24.6	21.9	18.9	17.4	19.2	18.0	18.7	19.0
It should be a crime	30.5	25.4	21.7	22.2	24.0	26.4	32.1	34.7	36.7	40.6	40.8	42.5	45.3	49.2	50.0	53.2	48.6	47.6	43.4	39.4
Don't know	16.8	13.0	13.4	14.6	13.8	16.4	15.4	17.1	18.1	17.2	16.9	16.7	14.8	13.9	14.6	13.6	14.3	15.7	15.1	14.8
Q. *If it were legal for people to USE marijuana, should it also be legal to SELL marijuana?*																				
No	27.8	23.0	22.5	21.8	22.9	25.0	27.7	29.3	27.4	30.9	32.6	33.0	36.0	36.8	38.8	40.1	36.8	37.8	36.7	33.1
Yes, but only to adults	37.1	49.8	52.1	53.6	53.2	51.8	48.6	46.2	47.6	45.8	43.2	42.2	41.2	39.9	37.9	38.8	41.4	39.5	40.7	41.7
Yes, to anyone	16.2	13.3	12.7	12.0	11.3	9.6	10.5	10.7	10.5	10.6	11.2	10.4	9.2	10.5	9.2	9.6	9.4	9.6	10.1	11.6
Don't know	18.9	13.9	12.7	12.6	12.6	13.6	13.2	13.8	14.6	12.8	13.1	14.4	13.6	12.8	14.1	11.6	12.5	13.1	12.5	13.7
Q. *If marijuana were legal to use and legally available, which of the following would you be most likely to do?*																				
Not use it, even if it were legal and available	53.2	50.4	50.6	46.4	50.2	53.3	55.2	60.0	60.1	62.0	63.0	62.4	64.9	69.0	70.1	72.9	70.7	72.5	69.0	64.6
Try it	8.2	8.1	7.0	7.1	6.1	6.8	6.0	6.3	7.2	6.6	7.5	7.6	7.3	7.1	6.7	7.0	6.3	7.4	7.3	7.6
Use it about as often as I do now	22.7	24.7	26.8	30.9	29.1	27.3	24.8	21.7	19.8	19.1	17.7	16.8	16.2	13.1	13.0	10.1	11.7	10.2	11.9	14.3
Use it more often than I do now	6.0	7.1	7.4	6.3	6.0	4.2	4.7	3.8	4.9	4.7	3.7	5.0	4.1	4.3	2.4	2.7	3.3	3.2	3.5	4.7
Use it less often than I do now	1.3	1.5	1.5	2.7	2.5	2.6	2.5	2.2	1.5	1.6	1.6	2.0	1.3	1.5	2.1	1.1	1.6	1.0	1.4	1.5
Don't know	8.5	8.1	6.6	6.7	6.1	5.9	6.9	6.0	6.4	6.0	6.5	6.1	6.3	5.0	5.7	6.1	6.4	5.7	7.0	7.3
Approx. N =	*2600*	*2970*	*3110*	*3710*	*3280*	*3210*	*3600*	*3620*	*3300*	*3220*	*3230*	*3080*	*3330*	*3277*	*2812*	*2570*	*2515*	*2672*	*2768*	*2597*

SOURCE: The Monitoring the Future Study, the University of Michigan would use it more often than at present and only another 8% think they would try it. Some 7% say they do not know how they would react.

A special study of the effects of decriminalization at the state level during the late 1970s[35] (which falls well short of the fully-legalized situation posited in this question) revealed no evidence of any impact of decriminalization on the use of marijuana, nor even on attitudes and beliefs concerning its use. However, the situation today is very different, with much more peer disapproval and more rigorous enforcement. The symbolic message, and the impact, of legalizing or decriminalizing marijuana would likely be different, as well. Therefore, we do not believe that those findings from the late 1970s can be validly generalized to the legalization of marijuana today.

Trends in Attitudes and Predicted Responses

- Between 1978 and 1990 American young people became much more supportive of legal prohibitions on the use of illegal drugs, whether used in private or in public (Table 23).

- Between 1976 and 1979 seniors' preferences for decriminalization or legalization remained fairly constant; but between 1979 and 1990 the proportion favoring outright legalization dropped by almost half (from 32% in 1979 to 16% in 1990), while there was a corresponding doubling in the proportion saying marijuana use should be a crime (from 24% to 53%). Also reflecting this increased conservatism about marijuana, somewhat fewer said they would support legalized *sale*, even if *use* were made legal (down from 65% in 1979 to 48% in 1990).

- Since 1990 these policy attitudes have begun to soften again. Fewer favor criminal penalties and more favor legal sale (see Table 24). For example, in 1994, the proportion saying that using marijuana should be entirely legal is 27%, up from 16% in 1990.

- The predictions about personal marijuana use, if sale and use were legalized, have been quite similar for all high school classes. The slight shifts being observed are mostly attributable to the changing proportions of seniors who actually use marijuana.

- As with all of the other attitudes and beliefs examined in this chapter, the long term anti-drug changes appeared to level or reverse since 1990.

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[35] See Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1981). *Marijuana decriminalization: The impact on youth, 1975-1980* (Monitoring the Future Occasional Paper No. 13). Ann Arbor: Institute for Social Research.

Chapter 9

THE SOCIAL MILIEU

The preceding chapter dealt with students' own attitudes about various forms of drug use. Attitudes about drugs, as well as drug-related behaviors, obviously do not occur in a social vacuum. Drugs are discussed in the media; they are a topic of considerable interest and conversation among young people; they are also a matter of much concern to parents, concern which often is strongly communicated to their children. We know, young people are affected by the actual drug-taking behaviors of their friends and acquaintances, as well as by the availability of the various drugs. This section presents data on several of these relevant aspects of the social milieu.

We begin with two sets of questions about parental and peer attitudes, questions which closely parallel the questions about respondents' own attitudes about drug use. Since measures of parental attitudes have not been carried in the study in recent years, those mentioned here are based on the much earlier 1979 results.

PERCEIVED ATTITUDES OF PARENTS AND FRIENDS: TWELFTH GRADERS

Perceptions of Parental Attitudes

- Even at the height of the drug epidemic in 1979, a large majority of seniors felt that their parents would disapprove or strongly disapprove of their exhibiting ***any of the drug use behaviors*** which are listed in Table 25. (The data for the perceived parental attitudes are not given in tabular form, but are displayed in Figures 30a and 30b.) In fact, because there was so little variability in the students' answers to these questions, they were dropped to make room for other questions. With the changing climate in recent years, as exemplified by the dramatic shifts in students' attitudes, it seems likely that parental attitudes would be even more restrictive today.

- Drug use appears to constitute one area in which the position of parents approaches complete unanimity. In 1979, over 97% of seniors said that their parents would disapprove or strongly disapprove of their smoking ***marijuana*** regularly, even trying ***LSD*** or ***amphetamines***, or having four or five ***drinks*** every day. (Although the questions did not include more frequent use of LSD or amphetamines, or any use of heroin, it is obvious that if such behaviors had been included in the list virtually all seniors would have indicated parental disapproval.)

- Even experimental use of ***marijuana*** was seen as a parentally disapproved activity by the great majority of the 1979 seniors (85%). Assuming that the students were generally correct about their parents' attitudes, these results clearly showed a substantial generational difference of opinion about this drug.

- Also likely to be perceived as rating high parental disapproval (91-93% disapproval) were ***occasional marijuana*** use, taking ***one or two drinks*** nearly every day, and ***pack-a-day cigarette smoking***.

- Slightly lower proportions of seniors (85%) felt their parents would disapprove of their having ***five or more drinks once or twice every weekend***. This was the same percentage that said their parents would disapprove of simply experimenting with marijuana, showing a considerably more tolerant parental attitude toward alcohol than marijuana.

Perceptions of Friends' Attitudes

- Since the beginning of the study, a parallel set of questions has asked respondents to estimate their friends' attitudes about drug use (Table 25). These questions ask, "How do you think your close friends feel (or would feel) about you [taking the specified drug at the specified level]...?" The highest levels of peer disapproval in 1994 for experimenting with a drug are associated with trying ***crack*** (94%), ***cocaine powder*** (93%), ***amphetamines*** (85%), and ***LSD*** (83%). Presumably, if ***heroin*** or ***PCP*** were on the list, they too would receive very high peer disapproval.

- Even experimenting with ***marijuana*** now is viewed with disapproval by most seniors' friends (63%); and a large majority think their friends would disapprove if they smoked marijuana regularly (81%).

- Nearly three-quarters of all seniors think they would face peer disapproval if they smoked a ***pack or more of cigarettes daily*** (72%).

- While ***heavy drinking on weekends*** is judged by more than half (59%) to be disapproved of by their friends (many of whom exhibit that behavior themselves), substantially more (76%) think consumption of ***one or two drinks daily*** would be disapproved, and the great majority (85%) would face the disapproval of their friends if they engaged in ***heavy daily drinking***.

- In sum, peer norms among twelfth grade students differ considerably for the various drugs and for varying degrees of involvement with those drugs, but overall they tend to be quite conservative. The great majority of seniors have friendship circles which do not condone use of the ***illicit drugs other than marijuana***, and almost two-thirds (63%) of them believe their friends would disapprove of their even trying marijuana.

- While we did not have the space to include these questions in the eighth and tenth grade questionnaires (for which there are only two

TABLE 25

Trends in Proportion of Friends Disapproving of Drug Use

Twelfth Graders

	Percent saying friends disapprove[a]																				
Q How do you think your close friends feel (or would feel) about you . . .	Class of 1975[b]	Class of 1976	Class of 1977[b]	Class of 1978	Class of 1979[b]	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Trying marijuana once or twice	44.3	—	41.8	—	40.9	42.6	46.4	50.3	52.0	54.1	54.7	56.7	58.0	62.9	63.7	70.3	69.7	73.1	66.6	62.7	-3.9s
Smoking marijuana occasionally	54.8	—	49.0	—	48.2	50.6	55.9	57.4	59.9	62.9	64.2	64.4	67.0	72.1	71.1	76.4	75.8	79.2	73.8	69.1	-4.7ss
Smoking marijuana regularly	75.0	—	69.1	—	70.2	72.0	75.0	74.7	77.6	79.2	81.0	82.3	82.9	85.5	84.9	86.7	85.9	88.0	83.5	80.6	-2.9s
Trying LSD once or twice	85.6	—	86.6	—	87.6	87.4	86.5	87.8	87.8	87.6	88.6	89.0	87.9	89.5	88.4	87.9	87.9	87.3	83.5	83.4	-0.1
Trying cocaine once or twice	—	—	—	—	—	—	—	—	—	—	—	79.6	83.9	88.1	88.9	90.5	91.8	92.2	91.1	91.4	+0.3
Taking cocaine occasionally	—	—	—	—	—	—	—	—	—	—	—	87.3	89.7	92.1	92.1	94.2	94.7	94.4	93.7	93.9	+0.2
Trying crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.2	95.0	94.4	94.6	95.1	93.9	-1.2
Taking crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.7	96.5	95.7	95.9	96.4	95.3	-1.1
Trying coke powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	91.7	93.4	93.3	94.0	94.2	93.2	-1.0
Taking coke powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.0	95.0	94.8	94.8	95.2	94.7	-0.5
Trying an amphetamine once or twice	78.8	—	80.3	—	81.0	78.9	74.4	75.7	76.8	77.0	77.0	79.4	80.0	82.3	84.1	84.2	85.3	85.7	83.2	84.5	+1.3
Taking one or two drinks nearly every day	67.2	—	71.0	—	71.0	70.5	69.5	71.9	71.7	73.6	75.4	75.9	71.8	74.9	76.4	79.0	76.6	77.9	76.8	75.8	-1.0
Taking four or five drinks every day	89.2	—	88.1	—	88.5	87.9	86.4	86.6	86.0	86.1	88.2	87.4	85.6	87.1	87.2	88.2	86.4	87.4	87.2	85.2	-2.0
Having five or more drinks once or twice every weekend	55.0	—	53.4	—	51.3	50.6	50.3	51.2	50.6	51.3	55.9	54.9	52.4	54.0	56.4	59.0	58.1	60.8	58.5	59.1	+0.6
Smoking one or more packs of cigarettes per day	63.6	—	68.3	—	73.4	74.4	73.8	70.3	72.2	73.9	73.7	76.2	74.2	76.4	74.4	75.3	74.0	76.2	71.8	72.4	+0.6
Approx. N =	*2488*	—	*2615*	—	*2716*	*2766*	*3120*	*3024*	*2722*	*2721*	*2688*	*2639*	*2815*	*2778*	*2400*	*2184*	*2160*	*2229*	*2220*	*2149*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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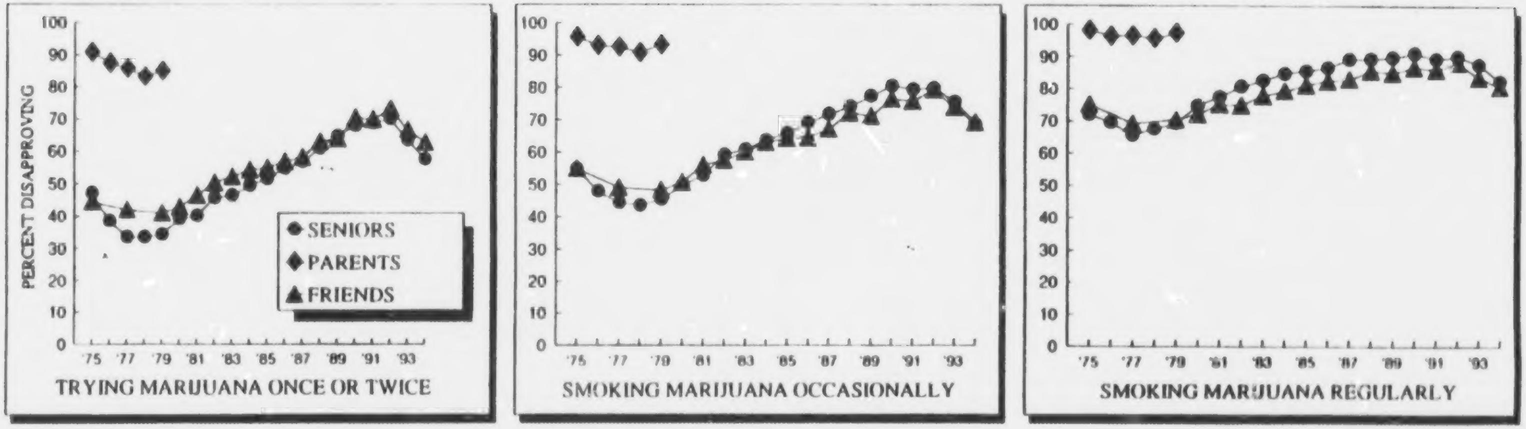
[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b] These figures have been adjusted to correct for a lack of comparability of question-context among administrations. (See text for discussion.)

FIGURE 30a

Trends in Disapproval of Illicit Drug Use

Twelfth Graders, Parents, and Peers



TRYING MARIJUANA ONCE OR TWICE

SMOKING MARIJUANA OCCASIONALLY

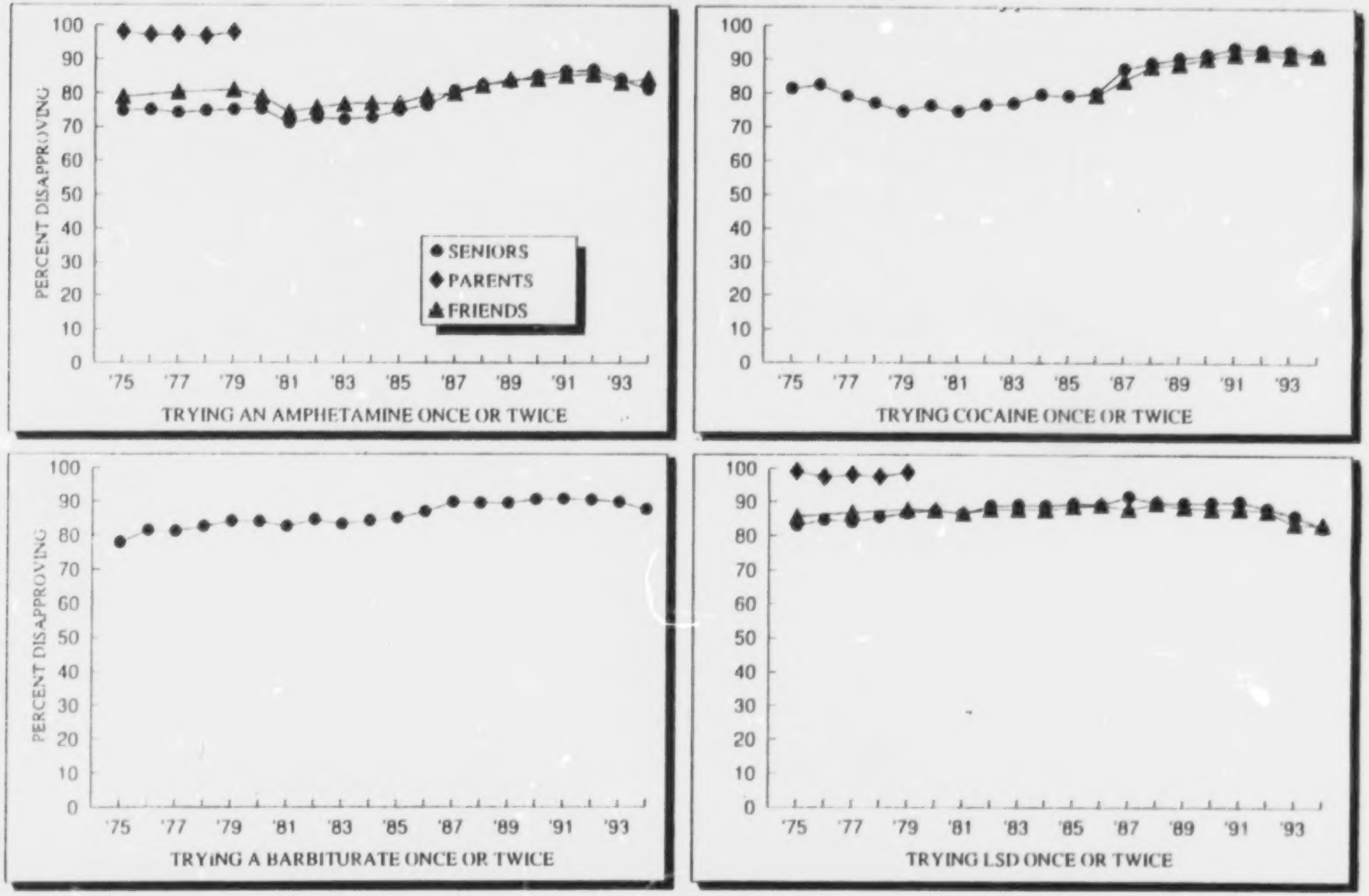
SMOKING MARIJUANA REGULARLY

NOTE: The 1975, 1977, and 1979 points indicating the percentage of seniors who said their friends would disapprove have been adjusted to compensate for lack of comparability of question-context between administration years. (See text for discussion.)

FIGURE 30b

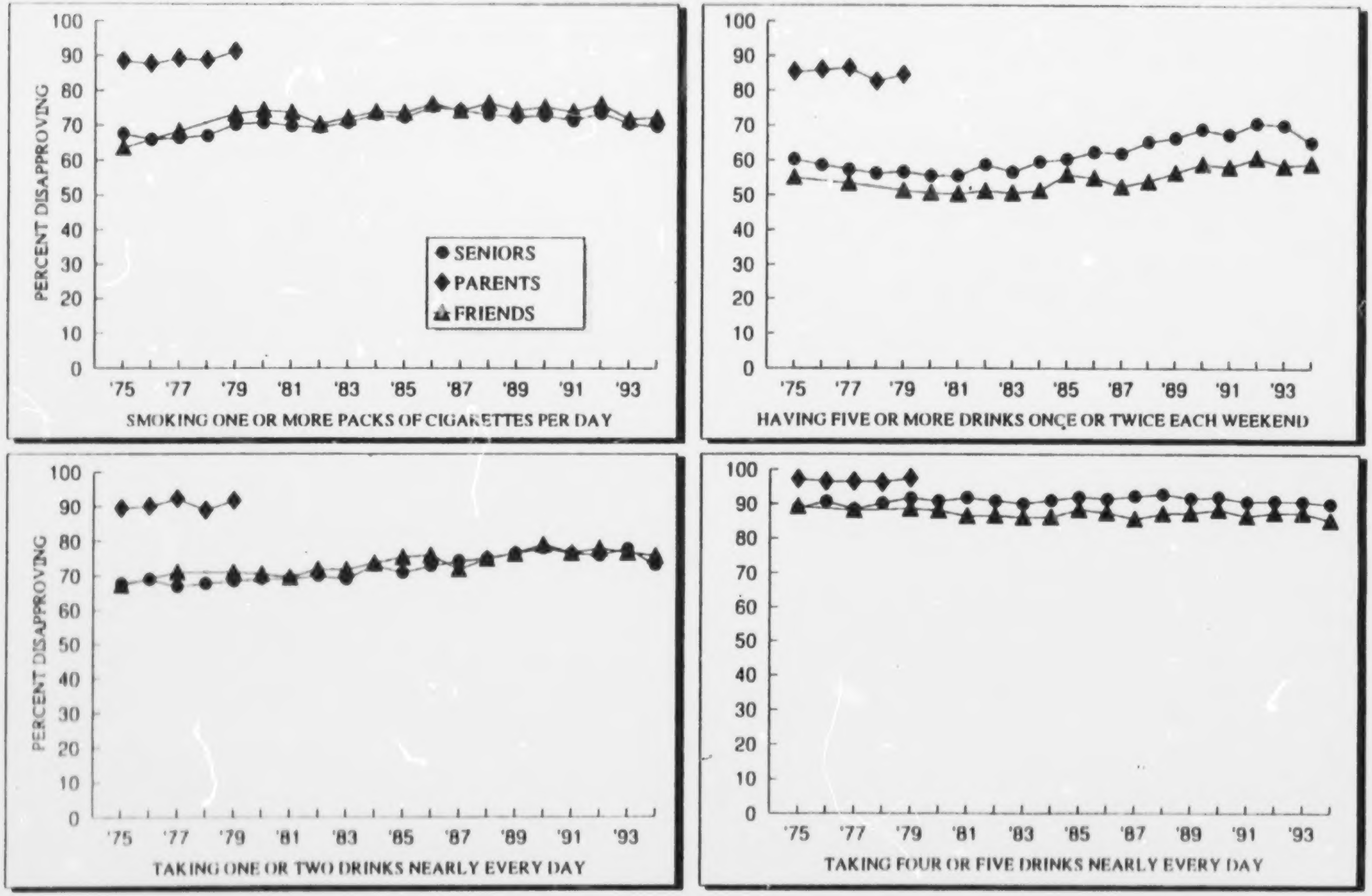
Trends in Disapproval of Illicit Drug Use

Twelfth Graders, Parents, and Peers



NOTE: The 1975, 1977, and 1979 points indicating the percentage of seniors who said their friends would disapprove have been adjusted to compensate for lack of comparability of question-context between administration years. (See text for discussion.)

FIGURE 31
Trends in Disapproval of Licit Drug Use
Twelfth Graders, Parents, and Peers



SMOKING ONE OR MORE PACKS OF CIGARETTES PER DAY

HAVING FIVE OR MORE DRINKS ONCE OR TWICE EACH WEEKEND

TAKING ONE OR TWO DRINKS NEARLY EVERY DAY

TAKING FOUR OR FIVE DRINKS NEARLY EVERY DAY

NOTE: The 1975, 1977, and 1979 points indicating the percentage of seniors who said their friends would disapprove have been adjusted to compensate for lack of comparability of question-context between administration years. (See text for discussion.)

forms instead of six) there seems little doubt that they would report at least as restrictive peer norms as the twelfth graders, and perhaps more restrictive ones, based on the cross-grade comparisons of personal disapproval given in Chapter 8.

A Comparison of the Attitudes of Parents, Peers, and Twelfth Graders

A comparison of seniors' perceptions of friends' disapproval with their perceptions of parents' disapproval, in the years for which comparison is possible, showed several interesting findings.

- First there was rather little variability from year to year in students' perceptions of their parents' attitudes. On any of the drug behaviors listed nearly *all* said their parents would disapprove. Nor was there much variability among the different drugs in perceived parental attitudes. However, peer norms varied much more from drug to drug. From these facts we may conclude that peer norms have a much greater chance of explaining variability in the respondent's own individual attitudes or use than parental norms, simply because the peer norms vary more. We wish to emphasize that this is quite different than saying that parental attitudes do not matter, or even that they matter less than peer attitudes.

- Despite less variability in parental attitudes, the *ordering* for disapproval of drug use behaviors was much the same as for peers. That is, among the illicit drugs asked about, the highest frequencies of perceived disapproval were for trying cocaine, while the lowest frequencies were for trying marijuana.

- A comparison with the seniors' own attitudes regarding drug use reveals that on the average they are much more in accord with their peers than with their parents (see Figures 30a, 30b, and 31). The differences between seniors' own disapproval ratings in 1979 and those attributed to their parents tended to be large, with parents seen as more conservative overall in relation to ***every drug***, licit or illicit. The largest difference occurred in the case of ***marijuana*** experimentation, where only 34% of seniors in 1979 said they disapproved vs. 85% who said their parents would disapprove. Despite the near doubling in seniors' own disapproval rates (to 58% in 1994), it likely would still show the greatest disparity between students own attitudes and those of their parents.

Trends in Perceptions of Parents' and Friends' Attitudes

A number of important changes in twelfth graders' perceptions of their peers' attitudes have taken place. These shifts are presented graphically in Figures 30a, 30b, and 31. As can be seen in those figures, adjusted (dotted) trend lines have been introduced before 1980. This was done because we discovered that the deletion in 1980 of the questions about parents' attitudes–which, up until then, had been located immediately preceding the questions about friends' attitudes–removed what we judged to be an artifactual depression of the ratings of friends' attitudes, a phenomenon known as a question-context effect. This effect was particularly evident in the trend lines dealing with alcohol use, where otherwise smooth trend lines showed abrupt upward shifts in 1980. It appears that when questions about parents' attitudes were present, respondents tended to understate peer disapproval in order to emphasize the *difference* in attitudes between their parents and their peers. In the adjusted lines, we have attempted to correct for that artifactual depression in the 1975, 1977, and 1979 scores.[36] We think the adjusted trend lines give a more accurate picture of the change which took place then. Note that the question-context effect seems to have had more influence on the questions dealing with cigarettes and alcohol than on those dealing with illicit drugs. Aside from this change attributable to question context, a number of real and important changes have occurred.

- For each level of ***marijuana*** use–trying once or twice, occasional use, regular use–there had been a *drop* in perceived disapproval for both parents and friends up until 1977 or 1978. We know from our other findings that these perceptions correctly reflected actual shifts in the attitudes of their peer groups–that is, that acceptance of marijuana was in fact increasing among seniors (see Figures 30a and 30b). There is little reason to suppose such perceptions are less accurate in reflecting shifts in parents' attitudes. Therefore, we conclude that the social norms regarding marijuana use among adolescents and adults had been relaxing before 1979. However, consistent with the seniors' reports about their own attitudes, there was a sharp reversal in peer norms (and very likely adult norms, as well) regarding all levels of marijuana use. Peer disapproval of marijuana use continued to increase for more than a decade, until 1992. In 1993 another sharp reversal occurred, with the percent of seniors saying that their friends would disapprove dropping from 5 to 7 percentage points, depending on the level of use (i.e., once or twice, occasionally, or regularly). Perceived peer disapproval dropped another 3 to 5 percentage points in 1994.

- From 1975 through 1979 there was relatively little change in either self-reported attitudes or perceived peer attitudes toward ***amphetamine*** use, but in 1981 both measures showed significant and parallel dips in disapproval, and at the same time use rose sharply.

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[36] The correction evolved as follows: We assumed that a more accurate estimate of the true change between 1979 and 1980 could be obtained by taking an average of the changes observed in the year prior and the year subsequent, rather than by taking the observed change (which we knew to contain the effect of a change in question context). We thus calculated an *adjusted* 1979-1980 change score by taking an average of one-half the 1977-1979 change score (our best estimate of the 1978-1979 change) plus the 1980-1981 change score. This estimated change score was then subtracted from the observed change score for 1979-1980, the difference being our estimate of the amount by which peer disapproval of the behavior in question was being understated because of the context in which the questions occurred prior to 1980. The 1975, 1977, and 1979 observations were then adjusted upward by the amount of that correction factor.

Since 1981 disapproval has been rising, as use has declined. In 1994 personal disapproval of both experimental and regular use decreased significantly, as use increased only slightly. However, in this case reported peer disapproval actually increased some–an unusual divergence from self-reported attitudes.

- Peer disapproval of ***LSD***, which has been high and relatively stable for some years, decreased significantly in 1993 as use increased significantly. In 1994 there was no significant change in either measure. In fact, the peak level for disapproval of LSD occurred in 1988, when 90% said their friends would disapprove trying it. By 1994 this statistic had fallen to 83% with nearly a 4 percentage point drop in 1993 alone.

- While perceived attitudes of friends was not asked for ***cocaine*** (until 1986), or for ***barbiturates***, it seems likely that such perceptions moved in parallel to the seniors' own attitudes, since such parallel movement has been observed for virtually all other drugs (see Figures 30a and 30b). In fact, peer disapproval of cocaine use has been roughly parallel to seniors' disapproval since 1986. This also would suggest that disapproval has risen gradually but steadily for ***barbiturate*** use since 1975.

- Seniors' own disapproval of experimental ***cocaine*** use dropped between 1975 to 1979 as use increased, and then rose very gradually through 1992. Questions on friends' attitudes about cocaine use were added to the study in 1986. Between 1986 and 1992 a sharp increase in peer disapproval of experimental or occasional cocaine use was observed, with the proportion saying that their close friends would disapprove of their experimenting with cocaine rising from 80% in 1986 to 92% in 1992. This corresponds to the period in which an even larger increase in perceived risk occurred, and we hypothesize that the change in the perceived dangers of a drug contribute to changes in the acceptability of using that drug.[37] In 1993, perceived friends' disapproval stabilized, and remained stable in 1994.

- Regarding ***regular cigarette smoking***, the proportion of seniors saying that their friends would disapprove of them smoking a pack-a-day or more rose from 64% (adjusted) in 1975 to 74% in 1980. During the twelve-year period between 1980 and 1992, perceived peer disapproval fluctuated by only a few percentage points. It then dropped significantly from 76% in 1992 to 72% in 1993 where it remained in 1994.

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[37] Johnston, L.D. (1991) Toward a theory of drug epidemics. *In* R.L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, N.J.: Lawrence Erlbaum.

- For alcohol the perceived peer norms for ***weekend binge drinking*** generally moved in parallel with seniors' statements about their personal disapproval. This meant a slight decline in disapproval occurred in the mid-1970s and early 1980s followed by a period of gradual increase between 1983 and 1992. Some divergence appears to have occurred when seniors' reports of their own attitudes became less tolerant, while perceived peer norms changed more slowly. This suggests some "collective ignorance" of the extent to which peers disapproved of this activity. However, both measures declined some between 1992 and 1994, again with self-reported attitudes moving faster, this time reducing the gap between them.

- ***Heavy daily drinking*** is seen by the great majority (85% in 1994) as disapproved by peers, with little systematic change over more than a decade. Taking ***one or two drinks nearly every day*** has seen some growth in peer disapproval between 1981 and 1990, but a leveling since.

FRIENDS' USE OF DRUGS

It is generally acknowledged that much youthful drug use is initiated through a peer social-learning process, and research has shown a high correlation between an individual's illicit drug use and that of his or her friends. Such a correlation can, and probably does, reflect several different causal patterns: (a) a person with friends who use a drug will be more likely to try the drug; (b) conversely, the individual who is already using a drug will be likely to introduce friends to the experience; and (c) users are more likely to establish friendships with others who already are users.

Given the potential importance of exposure to drug use by others, we thought it would be useful to monitor students' association with others taking drugs, as well as their perceptions about the extent to which their friends use drugs. Two sets of questions, each covering all or nearly all of the categories of drug use treated in this report, asked seniors to indicate (a) how often during the past twelve months they were around people taking each of the drugs to get high or for "kicks," and (b) what proportion of their own friends use each of the drugs. (The data dealing with direct exposure to use may be found in Table 26. The questions dealing with friends' use are shown in Tables 27 and 28.) Responses to these two questions are highly correlated with the respondents' own drug use; thus, for example, seniors who have recently used marijuana are much more likely to report that they have been around others getting high on marijuana, and that most of their friends use it. The questions on proportions of friends using the various drugs were included in the questionnaires used with eighth and tenth graders and the results for those age groups will be discussed in a separate section below.

Exposure to Drug Use by Friends and Others: Twelfth Graders

- A comparison of the aggregated responses about friends' use and about being around people in the last twelve months who were using various

TABLE 26

Trends in Twelfth Graders' Exposure to Drug Use

(Entries are percentages)

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Any illicit drug[a]																					
% saying not at all	—	17.4	16.5	15.1	15.0	15.7	17.3	18.6	20.6	22.1	22.3	24.5	26.1	28.7	31.4	32.4	35.8	38.7	33.9	29.2	-4.7ss
% saying often	—	34.8	39.0	40.7	40.4	36.3	36.1	31.4	29.8	28.3	27.2	26.3	23.3	20.8	22.0	20.7	18.2	18.0	24.0	29.3	+5.3sss
Any illicit drug[a] except marijuana																					
% saying not at all	—	44.9	44.2	44.7	41.7	41.5	37.4	37.5	40.6	40.2	40.7	44.7	48.3	62.2	52.9	54.6	60.0	58.4	57.4	54.7	-2.7
% saying often	—	11.8	13.5	12.1	13.7	14.1	17.1	16.6	14.2	14.6	12.9	12.1	10.2	9.6	10.7	9.2	7.9	7.5	9.6	9.4	-0.2
Marijuana																					
% saying not at all	—	20.5	19.0	17.3	17.0	18.0	19.8	22.1	23.8	25.6	26.5	28.0	29.6	33.0	35.2	36.6	40.4	43.2	39.0	32.8	-6.2sss
% saying often	—	32.5	37.0	39.0	38.9	33.8	33.1	28.0	26.1	24.8	24.2	24.0	20.6	17.9	19.5	17.8	16.0	15.6	20.9	27.6	+6.7sss
LSD																					
% saying not at all	—	78.8	80.0	81.9	81.9	82.8	82.6	83.9	86.2	87.5	86.8	86.9	87.1	86.6	85.0	85.1	84.3	82.2	79.0	75.8	-3.2s
% saying often	—	2.2	2.0	1.8	2.0	1.4	2.0	1.9	1.4	1.5	1.3	1.6	1.8	1.6	2.2	2.6	2.9	3.0	3.9	4.2	+0.3
Other Psychedelics																					
% saying not at all	—	76.5	76.7	76.7	77.6	79.6	82.4	83.2	86.9	87.3	87.5	88.2	90.0	91.0	91.2	90.6	90.6	90.3	87.9	86.0	-1.9
% saying often	—	3.1	3.2	2.9	2.2	2.2	2.0	2.6	1.1	1.7	1.4	1.5	1.2	1.1	1.3	1.2	1.3	1.1	1.9	2.3	+0.4
Cocaine																					
% saying not at all	—	77.0	73.4	69.8	64.0	62.3	63.7	65.1	66.7	64.4	61.7	62.6	65.1	69.8	69.8	72.3	78.7	80.2	80.8	81.2	+0.4
% saying often	—	3.0	3.7	4.6	6.8	5.9	6.6	6.6	5.2	6.7	7.1	7.8	5.9	5.1	5.4	4.7	3.4	2.7	2.9	2.5	-0.4
Heroin																					
% saying not at all	—	91.4	90.3	91.8	92.4	92.6	93.4	92.9	94.9	94.0	94.5	94.0	94.2	94.3	93.5	94.6	94.9	94.6	94.3	92.7	-1.6
% saying often	—	0.8	1.1	0.9	0.7	0.4	0.6	1.0	0.7	1.1	0.5	1.0	0.9	0.8	1.0	0.5	0.9	0.7	1.1	0.7	-0.4
Other Narcotics																					
% saying not at all	—	81.9	81.3	81.8	82.0	80.4	82.5	81.5	82.7	82.0	81.6	84.4	85.6	85.2	86.2	85.8	88.7	88.9	87.6	85.1	-2.5s
% saying often	—	1.8	2.4	2.0	1.7	1.7	1.7	2.4	2.2	2.0	1.8	2.1	1.7	1.7	1.7	1.6	1.4	1.3	1.7	1.7	0.0
Amphetamines																					
% saying not at all	—	59.6	60.3	60.9	58.1	59.2	50.5	49.8	53.9	55.0	59.0	63.5	68.3	72.1	72.6	71.7	76.4	75.5	75.3	71.8	-3.5s
% saying often	—	6.8	7.9	6.7	7.4	8.3	12.1	12.3	10.1	9.0	6.5	5.8	4.5	4.1	4.7	4.1	3.1	3.0	3.9	4.1	+0.2
Barbiturates																					
% saying not at all	—	69.0	70.0	73.5	73.6	74.8	74.1	74.3	77.5	78.8	81.1	84.2	86.9	87.6	88.2	86.7	90.0	89.8	88.1	87.0	-1.1
% saying often	—	4.5	5.0	3.4	3.3	3.4	4.0	4.3	3.0	2.7	1.7	2.1	1.5	1.4	1.7	1.7	1.2	1.1	1.6	1.7	+0.1
Tranquilizers																					
% saying not at all	—	67.7	66.0	67.5	67.5	70.9	71.0	73.4	76.5	76.9	76.6	80.4	81.6	81.8	84.9	83.7	85.8	87.3	86.2	83.5	-2.7s
% saying often	—	5.5	6.3	4.9	4.3	3.2	4.2	3.5	2.9	2.9	2.2	2.5	2.6	2.2	2.1	1.9	1.4	1.9	1.7	1.8	+0.1
Alcoholic beverages																					
% saying not at all	—	6.0	5.6	5.5	5.2	5.3	6.0	6.0	6.0	6.0	6.0	5.9	6.1	6.9	7.7	6.4	8.3	9.4	8.2	10.0	+1.8
% saying often	—	57.1	60.8	60.8	61.2	60.2	61.0	59.3	60.2	58.7	59.5	58.0	58.7	56.4	55.5	56.1	54.5	53.1	51.9	54.0	+2.1
Approx. N =	—	*2950*	*3076*	*3682*	*3253*	*3259*	*3608*	*3645*	*3334*	*3238*	*3252*	*3078*	*3296*	*3300*	*2795*	*2556*	*2525*	*2630*	*2730*	*2581*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] These estimates were derived from responses to the questions listed. "Any illicit drug" includes all drugs listed except alcohol.

TABLE 27

Long-Term Trends in Proportion of Friends Using Drugs as Estimated by Twelfth Graders

(Entries are percentages)

Q. *How many of your friends would you estimate . . .*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93-'94 change
Take any illicit drug[a]																					
% saying none	14.2	15.4	13.1	12.5	11.0	12.5	14.6	13.7	17.4	19.0	17.6	17.8	18.3	20.9	23.1	29.0	30.9	32.7	29.0	21.7	-7.3sss
% saying most or all	31.9	31.7	33.2	36.3	37.0	32.5	29.8	26.5	23.8	20.9	22.7	21.5	18.6	15.8	15.7	11.6	11.7	12.0	15.5	20.3	+4.8ss
Take any illicit drug[a] other than marijuana																					
% saying none	33.3	44.5	42.5	43.6	38.7	37.6	36.7	35.3	38.8	38.7	38.2	36.7	37.6	43.5	43.8	49.9	53.7	52.9	51.3	46.3	-5.0ss
% saying most or all	10.6	8.9	7.7	8.5	10.4	11.1	11.9	10.9	11.0	10.3	10.4	10.3	9.2	6.9	7.7	5.1	4.6	5.3	7.1	7.1	0.0
Smoke marijuana																					
% saying none	17.0	17.1	14.1	13.9	12.4	13.6	17.0	15.6	19.7	22.3	20.5	20.8	21.6	24.7	27.5	31.7	34.2	36.9	32.6	24.4	-8.2sss
% saying most or all	30.3	30.6	32.3	35.3	35.5	31.3	27.7	23.8	21.7	18.3	19.8	18.2	15.8	13.6	13.4	10.1	10.0	10.3	13.9	18.9	+5.0sss
Use inhalants																					
% saying none	75.7	81.4	81.1	80.0	80.9	82.2	83.5	81.6	83.9	80.7	78.8	77.6	75.3	79.2	77.9	80.0	80.8	77.8	76.3	73.5	-2.8
% saying most or all	1.1	1.1	1.0	1.1	1.1	1.2	0.9	1.3	1.1	1.1	1.5	2.0	1.9	1.2	1.9	1.0	0.7	1.8	1.8	2.0	+0.2
Use nitrites																					
% saying none	—	—	—	—	78.4	81.0	82.6	82.5	85.5	85.0	84.4	82.0	81.7	86.4	86.7	89.6	91.1	91.0	89.3	90.0	+0.7
% saying most or all	—	—	—	—	1.9	1.3	1.2	0.9	0.7	1.2	1.0	1.2	1.3	0.7	0.9	0.6	0.4	0.7	0.7	0.8	+0.1
Take LSD																					
% saying none	63.5	69.4	68.1	70.1	71.1	71.9	71.5	72.2	76.0	76.1	75.6	75.5	74.7	75.9	74.8	75.0	76.6	71.9	68.7	65.9	-2.8
% saying most or all	2.7	2.8	3.0	2.0	1.9	1.8	2.2	2.4	1.4	2.0	1.5	1.8	1.6	1.5	2.4	1.9	1.7	2.4	3.8	4.2	+0.4
Take other psychedelics																					
% saying none	58.8	69.7	68.6	70.8	71.8	71.8	73.7	74.4	77.9	78.7	78.0	77.7	78.3	82.2	81.9	84.1	84.9	83.0	80.7	78.6	-2.1
% saying most or all	4.7	3.0	2.8	2.0	2.2	2.2	2.1	1.9	1.6	1.9	1.4	1.3	1.2	0.9	1.4	1.0	0.8	1.0	1.7	2.2	+0.5
Take PCP																					
% saying none	—	—	—	—	72.2	77.8	82.8	82.7	85.8	85.8	84.1	83.9	84.5	86.5	85.3	87.0	88.0	87.3	84.4	84.5	+0.1
% saying most or all	—	—	—	—	1.7	1.8	0.9	0.9	1.1	1.1	1.2	1.2	1.1	0.8	1.2	0.5	0.5	0.9	1.9	1.2	-0.7
Take MDMA (ecstasy)																					
% saying none	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.6	88.1	89.3	87.2	84.1	-3.1s
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.2	1.7	2.1	1.2	1.7	+0.5
Take cocaine																					
% saying none	66.4	71.2	69.9	66.8	61.1	58.4	59.9	59.3	62.4	61.1	56.2	54.4	56.3	62.3	62.6	68.3	73.2	73.7	75.5	73.9	-1.6
% saying most or all	3.4	3.2	3.6	4.0	6.0	6.1	6.3	4.9	5.1	5.1	5.8	6.2	5.1	3.4	3.7	2.1	1.5	1.5	2.1	1.5	-0.6
Take crack																					
% saying none	—	—	—	—	—	—	—	—	—	—	—	—	72.6	74.6	73.9	80.8	82.4	82.2	82.1	80.0	-2.1
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	2.2	1.1	2.1	0.6	0.6	0.7	0.9	1.0	+0.1
Take cocaine powder																					
% saying none	—	—	—	—	—	—	—	—	—	—	—	—	—	—	74.7	75.4	80.2	80.3	81.9	79.3	-2.6
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	2.5	1.8	2.0	1.6	1.9	+0.3

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 27 (cont.)

Long-Term Trends in Proportion of Friends Using Drugs as Estimated by Twelfth Graders

(Entries are percentages)

Q. *How many of your friends would you estimate . . .*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93-'94 change
Take heroin																					
% saying none	84.8	86.4	87.1	85.7	87.1	87.0	87.5	86.8	88.0	87.0	85.5	84.7	86.1	87.6	86.0	88.6	88.6	86.8	86.7	85.7	-1.0
% saying most or all	0.7	0.8	0.7	0.9	0.5	1.0	0.5	0.7	0.8	0.8	0.9	1.1	0.9	0.7	1.1	0.4	0.4	0.7	1.1	1.0	-0.1
Take other narcotics																					
% saying none	71.2	75.9	76.3	76.8	76.9	77.6	76.9	76.1	79.2	78.6	77.2	78.2	76.8	80.8	80.8	82.8	86.3	85.1	83.9	81.5	-2.4
% saying most or all	2.1	2.2	1.7	1.4	1.5	1.7	1.5	1.4	1.4	1.6	1.4	1.8	1.4	1.2	1.4	0.9	0.5	1.1	1.2	1.0	-0.2
Take amphetamines																					
% saying none	49.0	57.8	58.7	59.3	59.3	56.1	51.2	49.4	53.9	54.9	56.7	58.2	60.5	66.6	66.5	71.3	75.7	75.7	72.5	71.9	-0.6
% saying most or all	5.9	5.6	4.1	4.7	4.3	4.8	6.4	5.4	5.1	4.5	3.4	3.4	2.6	1.9	2.6	1.9	1.3	1.3	2.0	1.8	-0.2
Take crystal meth. (ice)																					
% saying none	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.9	89.8	91.1	90.6	88.2	-2.4s
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.0	1.5	1.2	1.5	+0.3
Take barbiturates																					
% saying none	55.0	63.7	65.3	67.5	69.3	69.5	68.9	68.7	71.7	73.4	72.9	74.4	75.7	80.3	79.7	82.6	85.2	83.6	82.2	81.8	-0.4
% saying most or all	4.3	3.5	3.0	2.3	2.1	2.6	2.1	1.8	1.7	1.7	1.6	1.4	1.1	1.1	1.4	0.6	0.5	0.6	1.0	1.1	+0.1
Take quaaludes																					
% saying none	68.3	73.0	71.7	73.0	72.3	67.5	65.0	64.5	70.3	73.9	74.0	76.5	78.0	82.9	83.4	85.7	88.0	86.9	85.8	85.8	0.0
% saying most or all	3.0	1.8	2.9	2.2	2.8	3.6	3.6	2.6	2.6	1.7	1.3	1.6	1.0	1.0	1.3	0.8	0.5	0.8	1.1	1.1	0.0
Take tranquilizers																					
% saying none	54.4	63.7	62.2	65.2	68.0	70.3	70.5	70.1	73.3	73.4	74.2	75.8	76.7	80.1	82.0	85.1	86.5	85.4	84.5	83.5	-1.0
% saying most or all	3.5	3.1	2.7	1.8	2.0	1.9	1.4	1.1	1.2	1.5	1.2	1.3	1.0	0.7	1.5	0.5	0.4	0.7	0.9	0.9	0.0
Drink alcoholic beverages																					
% saying none	3.3	4.9	5.6	5.1	4.6	3.9	5.3	4.3	4.5	5.4	5.4	4.4	4.6	4.3	4.9	8.0	8.8	9.5	11.1	9.9	-1.2
% saying most or all	68.4	64.7	66.2	68.9	68.5	68.9	67.7	69.7	69.0	66.6	66.0	68.0	71.8	68.1	67.1	60.5	58.6	56.9	57.0	59.6	+2.6
Get drunk at least once a week																					
% saying none	17.6	19.3	19.0	18.0	16.7	16.9	18.2	16.9	16.1	18.5	17.5	15.3	14.4	15.6	17.2	20.8	20.2	20.1	20.8	18.6	-2.2
% saying most or all	30.1	26.6	27.6	30.2	32.0	30.1	29.4	29.9	31.0	29.6	29.9	31.8	31.3	29.6	31.1	27.5	29.7	28.6	27.6	28.4	+0.8
Smoke cigarettes																					
% saying none	4.8	6.3	6.3	6.9	7.9	9.4	11.5	11.7	13.0	14.0	13.0	12.2	11.7	12.3	13.5	15.1	14.3	15.6	15.2	11.9	-3.3ss
% saying most or all	41.5	36.7	33.9	32.2	28.6	23.3	22.4	24.1	22.4	19.2	22.8	21.5	21.0	20.2	23.1	21.4	21.8	21.4	25.0	25.3	+0.3
Take steroids																					
% saying none	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	74.1	75.3	78.5	81.0	81.9	+0.9
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.0	1.7	0.9	1.2	+0.3
Approx. N =	*2640*	*2697*	*2788*	*3247*	*2933*	*2987*	*3307*	*3303*	*3095*	*2946*	*2971*	*2798*	*2948*	*2961*	*2587*	*2361*	*2339*	*2373*	*2410*	*2337*	

NOTES: **Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.**

SOURCE: **The Monitoring the Future Study, the University of Michigan.**

[*] **These estimates were derived from responses to the questions listed. "Any illicit drug" includes all of the drugs listed except MDMA (ecstasy), cocaine powder, crystal methamphetamine (ice), alcohol, cigarettes, and steroids. PCP and the nitrites were not included in 1975 through 1978. Crack was not included in 1975 through 1986.**

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TABLE 28

Trends in Friends' Use of Drugs as Estimated by Eighth, Tenth, and Twelfth Graders, 1991-1994

(Entries are percentages)

Q *How many of your friends would you estimate . . .*	8th Grade					10th Grade					12th Grade				
	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change	1991	1992	1993	1994	'93–'94 change
Smoke marijuana															
% saying none	78.1	74.9	69.2	58.9	-10.3sss	51.7	54.1	47.3	36.6	-10.7sss	34.2	36.9	32.6	24.4	-8.2sss
% saying most or all	3.3	4.1	6.0	10.5	+4.5sss	7.9	8.0	11.2	18.0	+6.8sss	10.0	10.3	13.9	18.9	+5.0sss
Use inhalants															
% saying none	79.5	76.9	73.7	70.8	-2.9s	82.7	82.2	78.9	76.4	-2.5s	80.8	77.8	76.3	73.5	-2.8
% saying most or all	2.4	2.9	3.7	4.2	+0.5	1.4	1.5	1.8	2.0	+0.2	0.7	1.8	1.8	2.0	+0.2
Take crack															
% saying none	91.4	89.1	87.5	84.8	-2.7sss	86.8	86.8	84.9	82.7	-2.2ss	82.4	82.2	82.1	80.0	-2.1
% saying most or all	0.9	1.0	1.3	1.6	+0.3	0.8	0.7	0.9	1.0	+0.1	0.6	0.7	0.9	1.0	+0.1
Take cocaine powder															
% saying none	91.6	89.3	87.9	85.7	-2.2ss	85.3	85.9	84.6	82.7	-1.9s	80.2	80.3	81.9	79.3	-2.6
% saying most or all	0.9	1.1	1.3	1.7	+0.4s	0.8	0.8	0.8	1.1	+0.3	1.8	2.0	1.6	1.9	+0.3
Take heroin															
% saying none	93.9	92.7	91.1	89.7	-1.4ss	92.2	91.9	90.7	89.6	-1.2s	88.6	86.8	86.7	85.7	-1.0
% saying most or all	0.7	0.9	0.9	1.3	+0.4ss	0.6	0.6	0.7	0.6	-0.1	0.4	0.7	1.1	1.0	-0.1
Drink alcoholic beverages															
% saying none	27.9	23.6	24.3	23.0	-1.3	7.1	8.7	8.2	7.2	-1.0s	8.8	9.5	11.1	9.9	-1.2
% saying most or all	21.0	23.7	25.5	27.4	+1.9	49.6	48.2	49.9	50.3	+0.4	58.6	56.9	57.0	59.6	+2.6
Get drunk at least once a week															
% saying none	57.2	52.0	52.0	49.7	-2.3	24.9	27.4	25.5	23.1	-2.4s	20.2	20.1	20.8	18.6	-2.2
% saying most or all	7.2	8.4	9.0	10.6	+1.6s	19.3	18.6	20.2	20.3	+0.1	29.7	28.6	27.6	28.4	+0.8
Smoke cigarettes															
% saying none	32.3	27.6	26.2	23.9	-2.3	18.8	18.0	14.6	13.7	-0.9	14.3	15.6	15.2	11.9	-3.3ss
% saying most or all	11.8	14.4	16.7	19.0	+2.3	18.2	18.7	22.8	24.7	+1.9	21.8	21.4	25.0	25.3	+0.3
Use smokeless tobacco															
% saying none	63.5	62.5	62.7	61.4	-1.3	46.9	46.9	42.5	41.6	-0.9	—	—	—	—	—
% saying most or all	3.8	4.2	3.8	4.8	+1.0	7.5	7.3	7.7	7.6	-0.1	—	—	—	—	—
Approx. N =	*15976*	*16606*	*16536*	*15791*		*14258*	*14008*	*14572*	*15039*		*2339*	*2373*	*2410*	*2337*	

NOTES: Level of significance of difference between the two years: s =.05, ss =.01, sss =.001.
'—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

drugs to get high reveals a high degree of correspondence between these two indicators of exposure. (These two questions appear on separate forms of the questionnaire.) For each drug, the proportion of respondents saying "none" of their friends use it is fairly close to the proportion who say that during the last twelve months they have not been around anyone who was using that drug to get high. Similarly, the proportion reporting that "most" or "all" of their friends use a given drug is roughly the same as the proportion saying they are "often" around people getting high on that drug.

- As would be expected, reports of exposure and friends' use closely parallel the figures on seniors' own use (compare Figures 2 and 32). It thus comes as no surprise that the highest levels of exposure involve ***alcohol***; a majority (54%) say they are "often" around people using it to get high. What *may* come as a surprise is that fully 28% of all seniors say that most or all of their friends ***get drunk*** at least once a week. (This *is* consistent, however, with the fact that 28% said they personally had taken five or more drinks in a row at least once during the prior two weeks.)

- After alcohol, students are exposed next most frequently to ***marijuana***. Two-thirds of the twelfth graders (67%) report some exposure to marijuana during the year. Some 28% say they are "often" around people using it to get high, and another 21% say they are exposed "occasionally." One in five (19%) say that most or all of their friends smoke marijuana.

- ***Amphetamines*** are next in exposure: 28% of seniors report some exposure to use in the prior year, and 28% say they have friends who use.

- Among all seniors, 19% have been around someone using ***cocaine*** to get high over the past year, and a quarter (26%) say they have some friends who use it.

- For the remaining illicit drugs, any exposure to use in the past year ranges from 24% for ***LSD*** down to 7% for ***heroin***.

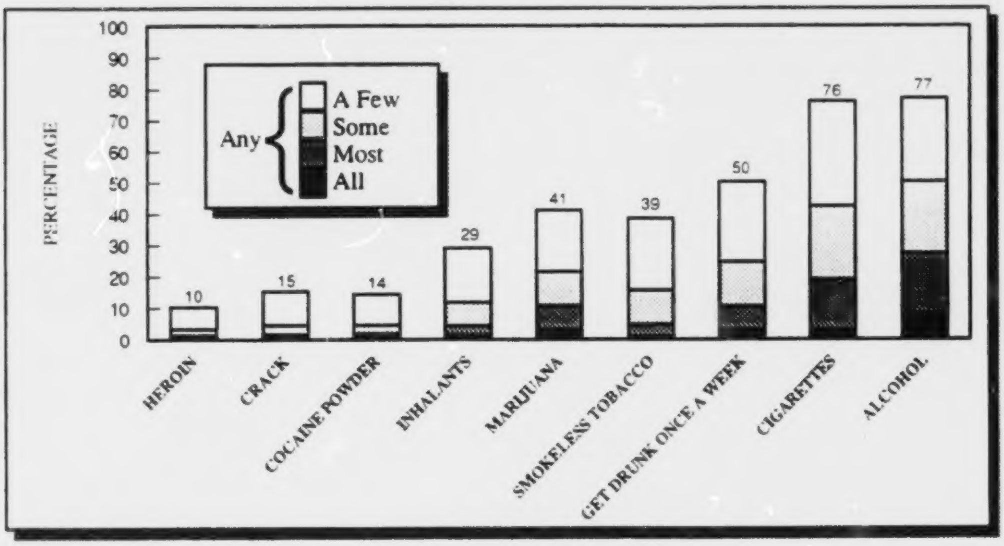
- A majority of seniors (55%) report no exposure to ***illicit drugs other than marijuana*** during the prior year, but not quite a third (29%) report no exposure to ***any illicit drug*** during the year. Thus, exposure to ***marijuana*** use, at least, is still widespread, but exposure to the use of ***drugs other than marijuana*** occurs for "only" 45%.

- Only one in every four seniors (25%) reports that most or all of their friends smoke ***cigarettes***, but 88% have at least some friends who smoke.

FIGURE 32

Proportion of Friends Using Each Drug as Estimated by Eighth, Tenth, and Twelfth Graders, 1994

Eighth Graders



Tenth Graders

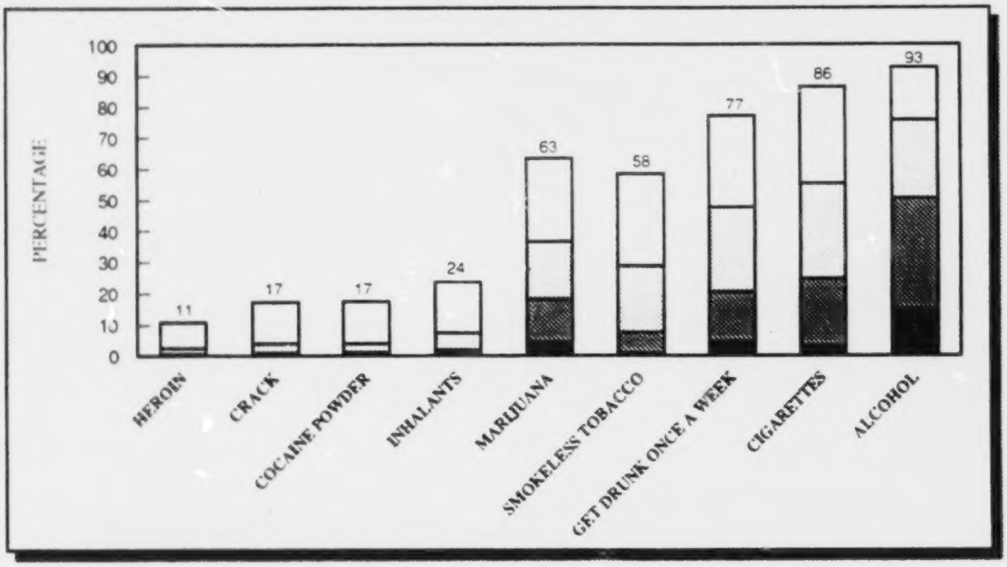
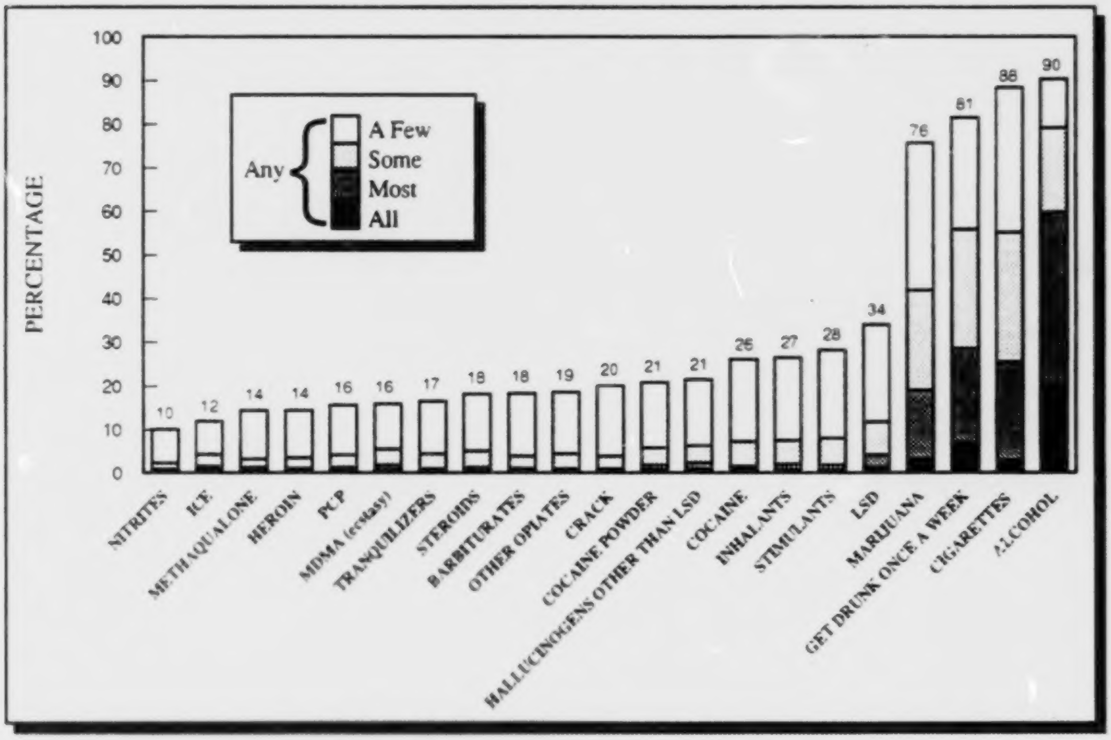


FIGURE 32 (cont.)

Proportion of Friends Using Each Drug as Estimated by Eighth, Tenth, and Twelfth Graders, 1994



Twelfth Graders

Friends' Use of Drugs: Eighth and Tenth Graders

While the questions about exposure to use were not included in the questionnaires for grades 8 and 10, the questions regarding the proportion of their friends who use each drug were.

- As would be expected, eighth and tenth grade students are considerably less likely to have friends who use the various drugs than twelfth graders (Table 28). For example, for ***cocaine powder***, ***crack***, and ***heroin*** fewer than 16% of the eighth graders and fewer than 18% of the tenth graders have any friends who use. (See Table 28.)

- For ***marijuana***, however, four in ten (41%) of the eighth graders and almost two-thirds (63%) of the tenth graders have friends who use.

- Among eighth graders, 29% have friends who use ***inhalants*** versus 24% of the tenth graders.

- Exposure to ***alcohol*** use through friends is much more widespread, with three-quarters (77%) of the eighth graders and 93% of the tenth graders having friends who use. In fact, one-fourth (27%) of the eighth graders and one-half (50%) of the tenth graders say that most or all of their friends ***drink***, and the proportions saying that most or all of their friends ***get drunk*** at least once a week is one in nine (11%) and one in five (20%), respectively.

- Exposure to ***cigarette smoking*** through friends also is very high for these children, with three-quarters (76%) of the eighth graders and 86% of the tenth graders saying they have some friends who smoke.

- More than a third of the eighth graders (39%) and more than half of the tenth graders (58%) have friends who use ***smokeless tobacco***.

TRENDS IN FRIENDS' USE OF DRUGS

Trends in Exposure to Drug Use by Friends and Others: Twelfth Graders

- Between 1976 and 1978 seniors' reports of exposure to ***marijuana*** use increased in about the same proportion as actual self-reported monthly use. Both exposure to use and actual use stabilized in 1979, and then both dropped steadily so that the proportion saying they are often around people using marijuana decreased by more than half between 1979 and 1992 (from 39% to 16%). In 1993 and 1994, however, there were significant *increases* in such exposure, reaching 28% in 1994, paralleling the significant rise in self-reported use.

- ***Cocaine*** showed a consistent increase from 1976 to 1979 in the proportion of seniors exposed to users, and self-reported use also rose. From 1979 to 1984 there was little change in exposure to use coinciding with a period of stability in self-reported use. Then in 1985 and 1986 there was an increase in reported exposure to use; these were the peak years in self-reported use. After 1986 seniors' exposure to cocaine use began dropping steadily, and the proportion saying they had any friends who used dropped from 46% in 1986 to 25% in 1993. In fact, in the four year interval from 1989 to 1993, this statistic dropped thirteen percentage points. However, use rose slightly in 1994, as did exposure to use.

- ***Inhalant*** use by friends has shown some increase since 1983, with the proportion reporting having any friends who use rising from 16% in 1983 to 19% in 1991, and then rising more quickly to 27% in 1994. (A question about exposure to inhalant use is not asked.)

- The actual use of ***LSD*** fell slightly from 1975 to 1984 and then stabilized for about five years. Exposure to use through friends and others followed a similar course. From 1989 to 1994 usage rates rose some (annual prevalence went from 4.9% to 6.9%) as did exposure to use (which rose from 15% to 24%).

- From 1979 to 1989 there was a gradual decrease in exposure to the use of ***psychedelics other than LSD*** which coincided with a continued decline in the self-reported use of this class of drugs. Between 1989 and 1992, friends' use remained fairly stable, but in 1993 and 1994 exposure increased, as did self-reported use.

- Exposure to ***tranquilizer*** use and actual use declined gradually since 1976. However, in 1994 use stabilized as reported exposure rose significantly.

- There was also a gradual decrease in exposure to the use of ***barbiturates*** from 1975 through 1980, followed by a leveling for two years and then a further decline in exposure between 1983 (when 23% reported some exposure) to 1992 (when 10% did). The exposure rate has increased slightly since 1992 (to 13%). These changes closely parallel those in actual use.

- Trend data on friends' use of ***PCP*** and the ***nitrites*** are available from 1979 onward. For both drugs, reported friends' use dropped significantly between 1979 and 1983. By 1983 half as many twelfth graders (14%) said any of their friends used PCP as those in 1979 (28%). Friends' use of nitrites dropped from 22% in 1979 to 15% in 1983. Since then there has been some further decrease in friends' use for both drugs.

- The proportion having any friends who used ***amphetamines*** rose from 41% to 51% between 1979 and 1982, paralleling the sharp increase in self-reported use over that period. The proportion saying they were around people using amphetamines "to get high or for kicks" also jumped substantially between 1980 and 1982 (by 9 percentage points).[38] It then fell continually by a full 26 percentage points between 1982 and 1992 (to 25%) as self-reported use declined substantially. Since 1992 self-reported use has increased significantly, as has exposure to use.

- Between 1978 and 1981 ***methaqualone*** use rose, as did the proportion of seniors saying some of their friends used it. A decline in both seniors' use and friends' use started around 1982, and by 1992 the proportion of seniors saying they had any friends who use quaaludes fell by nearly two-thirds (down from 35% to 13% between 1981 and 1992). Seniors' usage rates showed an even larger proportional decline, but in the last year or so both use and exposure have edged up.

- The proportion saying that "most or all" of their friends smoke ***cigarettes*** dropped steadily and substantially between 1976 and 1981, from 37% to 22%. During this period self-reported use dropped markedly, and more seniors perceived their friends as disapproving regular smoking. Between 1982 and 1992, friends' use and self-reported use remained relatively stable; in fact, in 1992 the friends' use rate was close to the 1981 rate. In 1977, the peak year for actual use, 34% said most or all of their friends smoked; in 1981, 22%, and in 1992, 21%. In 1993 there was a significant increase in most or all friends' using, to 25%, and self-reported smoking also increased significantly.

- The proportion saying most or all of their friends ***get drunk*** at least once a week increased between 1976 and 1979, from 27% to 32%; during the same period the prevalence of self-reported, occasional heavy drinking rose by about the same amount. There was little change in either measure for about five years. Beginning in 1984 and 1985, self-reports by seniors of their own heavy drinking began to decline, but reported heavy drinking by friends has shown a more modest decline. The most impressive fact here, is that more than a quarter of all high school seniors (28% in 1994) say that most or all of their friends get drunk at least once a week, which is exactly the same proportion that say they personally have been binge drinking in the past two weeks.

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[38] This finding was important, since it indicated that a substantial part of the increase observed in self-reported amphetamine use was due to things other than simply an increase in the use of over-the-counter diet pills or stay-awake pills, which presumably are not used to get high. Obviously, more young people were using stimulants for recreational purposes. There still remained the question, of course, of whether the active ingredients in those stimulants really were amphetamines.

And only one in five (19%) say that none of their friends get drunk that often.

Implications for Validity of Self-Reported Usage Questions

We have noted a high degree of correspondence in the aggregate level data presented in this report among seniors' self-reports of their *own* drug use, their reports concerning *friends'* use, and their own *exposure* to use. Drug-to-drug comparisons in any given year across these three types of measures tend to be highly parallel, as are the changes from year to year.[39] We take this consistency as additional evidence for the validity of the self-report data, and of trends in the self-report data, since there should be less reason to distort answers on use by unidentified friends, or general exposure to use, than to distort the reporting of one's own use. Figure 31 illustrates the degree of cross-time correspondence between the proportion of seniors saying they personally used marijuana in the year prior to the survey and that most or all of their friends use marijuana.

TRENDS IN FRIENDS' USE: EIGHTH AND TENTH GRADERS

Trend data for grades 8 and 10, presented in Table 28, are available only since 1991. In general, they show trends which are highly consistent with the trends in self-reported use at these grade levels. These questions are asked of all eighth and tenth grade respondents so the sample sizes are very large.

- In 1992 eighth graders showed increased self-reported use of a number of drugs (including ***marijuana***, ***inhalants***, ***cocaine powder***, and ***crack***), as well as in the proportion of their friends using them. In 1993, these trends continued among eighth graders, who were joined by tenth and twelfth graders in this turnaround.

- For ***marijuana***, self-reported use was up very sharply in all grades in 1994, a fact which was also reflected in reported use by friends. The proportions saying that some of their friends smoked marijuana rose by 10 percentage points among eighth graders in 1994, 11 percentage points among tenth graders (Table 28).

- In all three grades, the proportion saying that they have friends who use ***inhalants*** has risen consistently since 1991. Self-reported usage rates have also risen over the same period.

- Among eighth and tenth graders, there were increases in 1993 and again in 1994 in the proportion of friends using ***crack, cocaine***

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[39] Those minor instances of noncorrespondence may well result from the larger sampling errors in our estimates of these environmental variables, which are measured on a sample size one-fifth or one-sixth the size of the self-reported usage measures.

powder, and ***heroin*** (some reached significance). The use of those drugs has also increased (in some cases significantly) in these grades.

- The trends for using ***alcohol*** and ***getting drunk*** one or more times per week are more complicated. Eighth graders report a steady increase since 1991 in the proportions of their friends exhibiting these behaviors. Tenth graders show some increase since 1992 in drunkenness by friends but do not report any increase in the proportion of their friends who are drinking.

- The data from eighth and tenth graders show a steadily increasing proportion of friends ***smoking*** since 1991. Actual self-reported smoking rates have been on the rise in these same periods.

PERCEIVED AVAILABILITY OF DRUGS

One set of questions asks respondents to estimate how difficult it would be to obtain each of a number of different drugs if they wanted them. The answers range across five categories from "probably impossible" to "very easy."[40] While no systematic effort has been undertaken to assess directly the validity of these measures, it must be said that they do have a rather high level of face validity, particularly if it is the subjective reality of "perceived availability" which is purported to be measured. It also seems quite reasonable to us to assume that perceived availability tracks actual availability to some extent.

Perceived Availability

- There are substantial differences in the reported availability of the various drugs. In general, the more widely used drugs are reported to be available by the highest proportion of the age group, as would be expected (see Table 29). Also, drugs are generally more available to older age groups. Both associations are consistent with the notion that availability is largely attained through friendship circles. The higher the proportion of the friendship circle who uses the drug, the greater proportion of students who have access to it.

- The availability of ***alcohol*** and ***cigarettes*** was not asked of seniors since we assume that these drugs are almost universally available to them. However, they are asked of the eighth and tenth graders, and even at these grade levels the availability is extremely high. ***Cigarettes*** are seen as most available: 76% of eighth graders and 90% of tenth graders think they would be "fairly easy" or "very easy" to get.

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[40] In the questionnaire used with eighth and tenth graders, an additional answer category of "can't say, drug unfamiliar" is offered; respondents who chose this answer are included in the calculation of percentages.. Generally less than 20% of the respondents selected this answer.

TABLE 29

Trends in Perceived Availability of Drugs
Eighth, Tenth, and Twelfth Graders, 1992–1994

Percent saying "fairly easy" or "very easy" to get[a]

Q How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	8th Grade				10th Grade				12th Grade			
	1992	1993	1994	'93–'94 change	1992	1993	1994	'93–'94 change	1992	1993	1994	'93–'94 change
Marijuana	42.3	43.8	49.9	+6.1sss	65.2	68.4	75.0	+6.6sss	82.7	83.0	85.5	+2.5s
LSD	21.5	21.8	21.8	0.0	33.6	35.8	36.1	+0.3	44.5	49.2	50.8	+1.6
PCP[b]	18.0	18.5	17.7	-0.8	23.7	23.4	23.8	+0.4	31.7	31.7	31.4	-0.3
Crack	25.6	25.9	26.9	+1.0	33.7	33.0	34.2	+1.2	43.5	43.6	40.5	-3.1
Cocaine Powder	25.7	25.9	26.4	+0.5	35.0	34.1	34.5	+0.4	48.0	45.4	43.7	-1.7
Heroin	19.7	19.8	19.4	-0.4	24.3	24.3	24.7	+0.4	34.9	33.7	34.1	+0.4
Other Opiates[b]	19.8	19.0	18.3	-0.7	26.9	24.9	26.9	+2.0	37.1	37.5	38.0	+0.5
Amphetamines	32.2	31.4	31.0	-0.4	43.4	46.4	46.6	+0.2	58.8	61.5	62.0	+0.5
Crystal Meth. (Ice)[b]	16.0	15.1	14.1	-1.0	18.8	16.4	17.8	+1.4	26.0	26.6	25.6	-1.0
Barbiturates	27.4	26.1	25.3	-0.8	38.0	38.8	38.3	-0.5	44.0	44.5	43.3	-1.2
Tranquilizers	22.9	21.4	20.4	-1.0	31.6	30.5	29.8	-0.7	40.9	41.1	39.2	-1.9
Cigarettes	77.8	75.5	76.1	+0.6	89.1	89.4	90.3	+0.9	—	—	—	—
Alcohol	76.2	73.9	74.5	+0.6	88.6	88.9	89.8	+0.9	—	—	—	—
Steroids	24.0	22.7	23.1	+0.4	37.6	33.6	33.6	0.0	46.8	44.8	42.9	-1.9
Approx. N =	*8355*	*16775*	*16119*		*7014*	*14652*	*15192*		*2586*	*2670*	*2526*	

NOTES: Level of significance of difference between the two years: s =.05, ss =.01, sss =.001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, (5) Very easy. For 8th and 10th grades, there was another category—"Can't say, drug unfamiliar"—which was included in the calculation of these percentages.

[b] 8th and 10th grade only: Data based on a single questionnaire form, N is one-half of N indicated in 1993 and 1994.

- ***Alcohol*** also is seen as readily available by the great majority of these youngsters, with 75% of the eighth graders and 90% of the tenth graders saying they could get it fairly easily or very easily.

- By contrast, the illicit drugs are seen as accessible by far fewer of the younger students. Even so, ***marijuana*** is described as fairly easy or very easy to get by half (50%) of the eighth graders, followed by ***amphetamines*** (31%), ***crack*** (27%), ***cocaine powder*** (26%), ***barbiturates*** (25%), ***steroids*** (23%), and ***LSD*** (22%).

- We assume that many ***inhalants***–such as glues, butane, and aerosols–are universally available, and therefore, a question on their availability was not included.

- When we compare eighth, tenth, and twelfth grades, we find that perceived availability rises sharply with grade level. For example, while 50% of eighth graders say ***marijuana*** would be fairly easy or very easy to get, 75% of tenth graders say that, and 86% of the twelfth graders. In fact, for the other drugs included in the question, the proportion of students saying they are available to them nearly doubles between eighth grade and twelfth grade. These differences are probably attributable to the overall differences in prevalence rates across these grade levels: the children in lower grades are considerably less likely to have friends who use, and thus, less likely to have access through those friends. The differences between age groups may also reflect less willingness and/or less motivation on the part of those who deal drugs to establish contact with younger children.

- ***Marijuana*** appears to be universally available to high school seniors; some 86% report that they think it would be "very easy" or "fairly easy" for them to get–more than double the number who report ever having used it (38%).

- After marijuana, twelfth grade students indicate that ***amphetamines*** are among the easiest drugs to obtain (62%).

- More than half of the seniors (51%) see ***LSD*** as readily available, while just under half see the following drugs as readily available: ***cocaine powder*** (44%), ***barbiturates*** and ***steroids*** (43%), and ***crack*** (41%).

- ***Tranquilizers***, ***opiates other than heroin***, ***heroin***, ***psychedelics other than LSD***, and ***PCP*** are reported as available by substantial minorities of seniors (39%, 38%, 34%, 34%, and 31%, respectively). See Table 30 for the full list of drugs included in the questions for twelfth graders; a few of these were not asked of the younger students.

TABLE 30

Long-Term Trends in Perceived Availability of Drugs, Twelfth Graders

Q. *How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*	Percent saying "fairly easy" or "very easy" to get[a]																				
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93-'94 change
Marijuana	87.8	87.4	87.9	87.8	90.1	89.0	89.2	88.5	86.2	84.6	85.5	85.2	84.8	85.0	84.3	84.4	83.3	82.7	83.0	85.5	+2.5s
Amyl & Butyl Nitrites	—	—	—	—	—	—	—	—	—	—	—	—	23.9	25.9	26.8	24.4	22.7	25.9	25.9	26.7	+0.8
LSD	46.2	37.4	34.5	32.2	34.2	35.3	35.0	34.2	30.9	30.6	30.5	28.5	31.4	33.3	38.3	40.7	39.5	44.5	49.2	50.8	+1.6
PCP	—	—	—	—	—	—	—	—	—	—	—	—	22.8	24.9	28.9	27.7	27.6	31.7	31.7	31.4	-0.3
Some other psychedelic	47.8	35.7	33.8	33.8	34.6	35.0	32.7	30.6	26.6	26.6	26.1	24.9	25.0	26.2	28.2	28.3	28.0	29.9	33.5	33.8	+0.3
MDMA (ecstasy)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	22.0	22.1	24.2	28.1	31.2	+3.1s
Cocaine	37.0	34.0	33.0	37.8	45.5	47.9	47.5	47.4	43.1	45.0	48.9	51.5	54.2	55.0	58.7	54.5	51.0	52.7	48.5	46.6	-1.9
Crack	—	—	—	—	—	—	—	—	—	—	—	—	41.1	42.1	47.0	42.4	39.9	43.5	43.6	40.5	-3.1
Cocaine powder	—	—	—	—	—	—	—	—	—	—	—	—	52.9	50.3	53.7	49.0	46.0	48.0	45.4	43.7	-1.7
Heroin	24.2	18.4	17.9	16.4	18.9	21.2	19.2	20.8	19.3	19.9	21.0	22.0	23.7	28.0	31.4	31.9	30.6	34.9	33.7	34.1	+0.4
Some other narcotic (including methadone)	34.5	26.9	27.8	26.1	28.7	29.4	29.6	30.4	30.0	32.1	33.1	32.2	33.0	35.8	38.3	38.1	34.6	37.1	37.5	38.0	+0.5
Amphetamines	67.8	61.8	58.1	58.5	59.9	61.3	69.5	70.8	68.5	68.2	66.4	64.3	64.5	63.9	64.3	59.7	57.3	58.8	61.5	62.0	+0.5
Crystal meth. (ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.1	24.3	26.0	26.6	25.6	-1.0
Barbiturates	60.0	54.4	52.4	50.6	49.8	49.1	54.9	55.2	52.5	51.9	51.3	48.3	48.2	47.8	48.4	45.9	42.4	44.0	44.5	43.3	-1.2
Tranquilizers	71.8	65.5	64.9	64.3	61.4	59.1	60.8	58.9	55.3	54.5	54.7	51.2	48.6	49.1	45.3	44.7	40.8	40.9	41.1	39.2	-1.9
Steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.7	46.8	44.8	42.9	-1.9
Approx. N =	*2627*	*2865*	*3065*	*3598*	*3172*	*3240*	*3578*	*3602*	*3385*	*3269*	*3274*	*3077*	*3271*	*3231*	*2806*	*2549*	*2476*	*2586*	*2670*	*2526*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

- Even drugs with lower usage rates, such as ***ice***, ***ecstasy***, and the ***nitrite inhalants***, are seen as available by more than a quarter of the seniors.

- Two-thirds or more of those seniors who had used any of the illicit drugs in the past year felt that drug would be easy for them to get. (Data are not displayed here.)

Trends in Perceived Availability for Twelfth Graders

Trend data on availability for seniors are presented in Figures 33a through 33c and in Table 30.

- For the first time since the study began in 1975, ***marijuana*** showed a small but statistically significant decline in perceived availability between 1982 and 1984 (down 4 percentage points to 85%), undoubtedly due to the reduced proportion of seniors who had friends who used. There was little further change until 1994, when a significant increase in perceived availability occurred, corresponding to sharp increase in proportion of friends using.

- ***Amphetamines*** jumped 11 percentage points in availability between 1979 and 1982 (to 71%), but dropped by 14 percentage points between 1982 and 1991 (to 57%). Since 1991 there has been a steady increase in availability reaching 62% in 1994.

- The perceived availability of ***barbiturates*** also jumped about 6% between 1980 and 1982, but dropped back by 13 points between 1982 and 1991 (where it remains) reflecting its continued drop in the number of users.

- Between 1977 and 1980—the period of increased overall ***cocaine*** use—there was a substantial increase (15 percentage points) in the perceived availability of cocaine (see Figures 33a and 33b and Table 30). Availability then leveled, and dropped some in 1983 and 1984, before rising significantly (by 4%) in 1985, again as use rose. Perceived availability rose another 2.6% in 1986. *Since 1986 actual use of cocaine has dropped sharply, but reported availability continued to rise through 1989.* Because there was no drop in perceived availability between 1986 and 1989 we discount reduction in supply as an explanation for the significant decline in use observed in those years. Between 1989 and 1994 there was a significant 12-percentage-point decrease in perceived availability—perhaps reflecting the impact of the greatly reduced proportion of seniors who have friends who use. The percentage reporting friends who use dropped by 11 points during the same interval.

FIGURE 33a

Trends in Perceived Availability of Drugs for Twelfth Graders

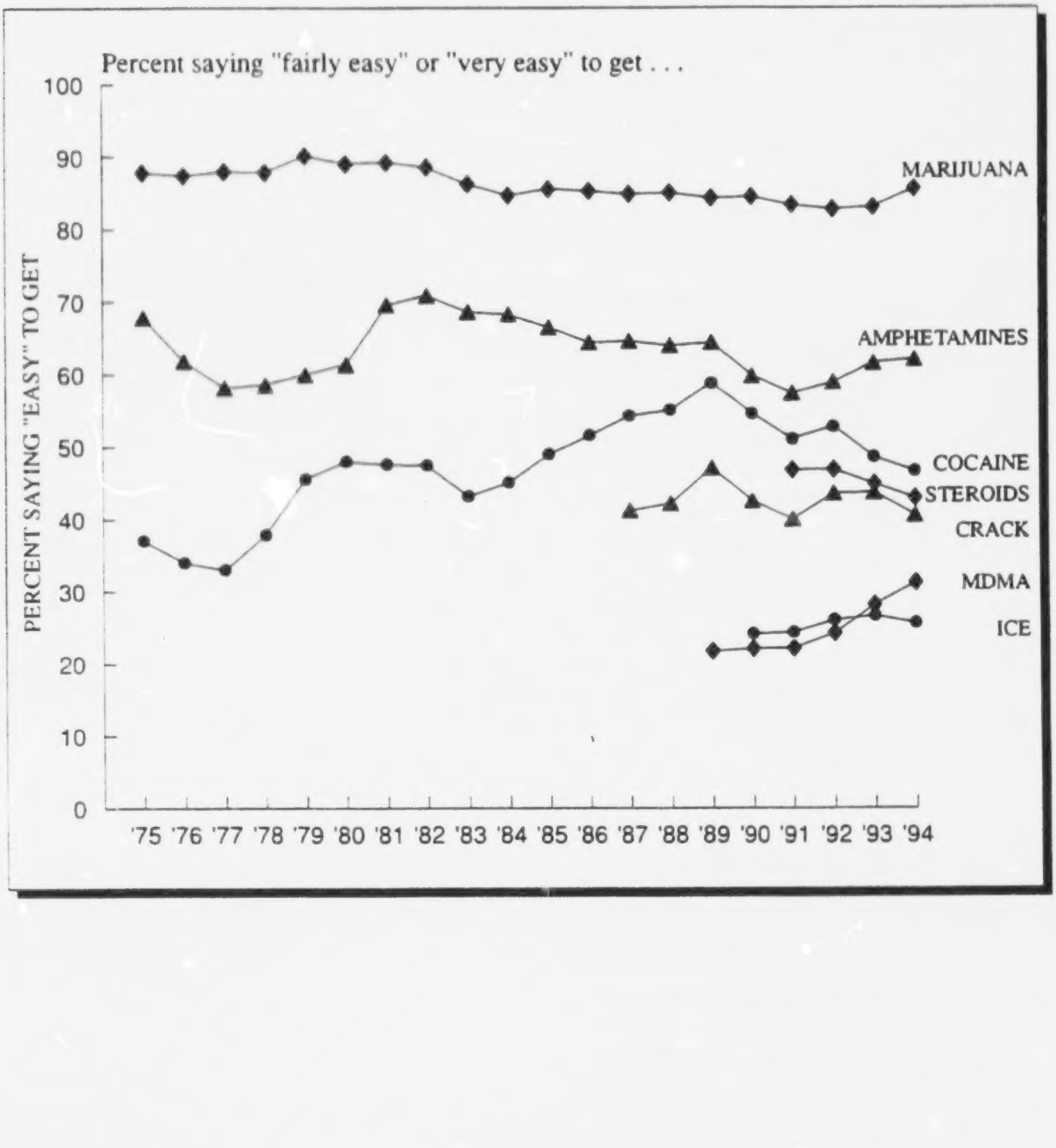


FIGURE 33b

Trends in Perceived Availability of Drugs for Twelfth Graders

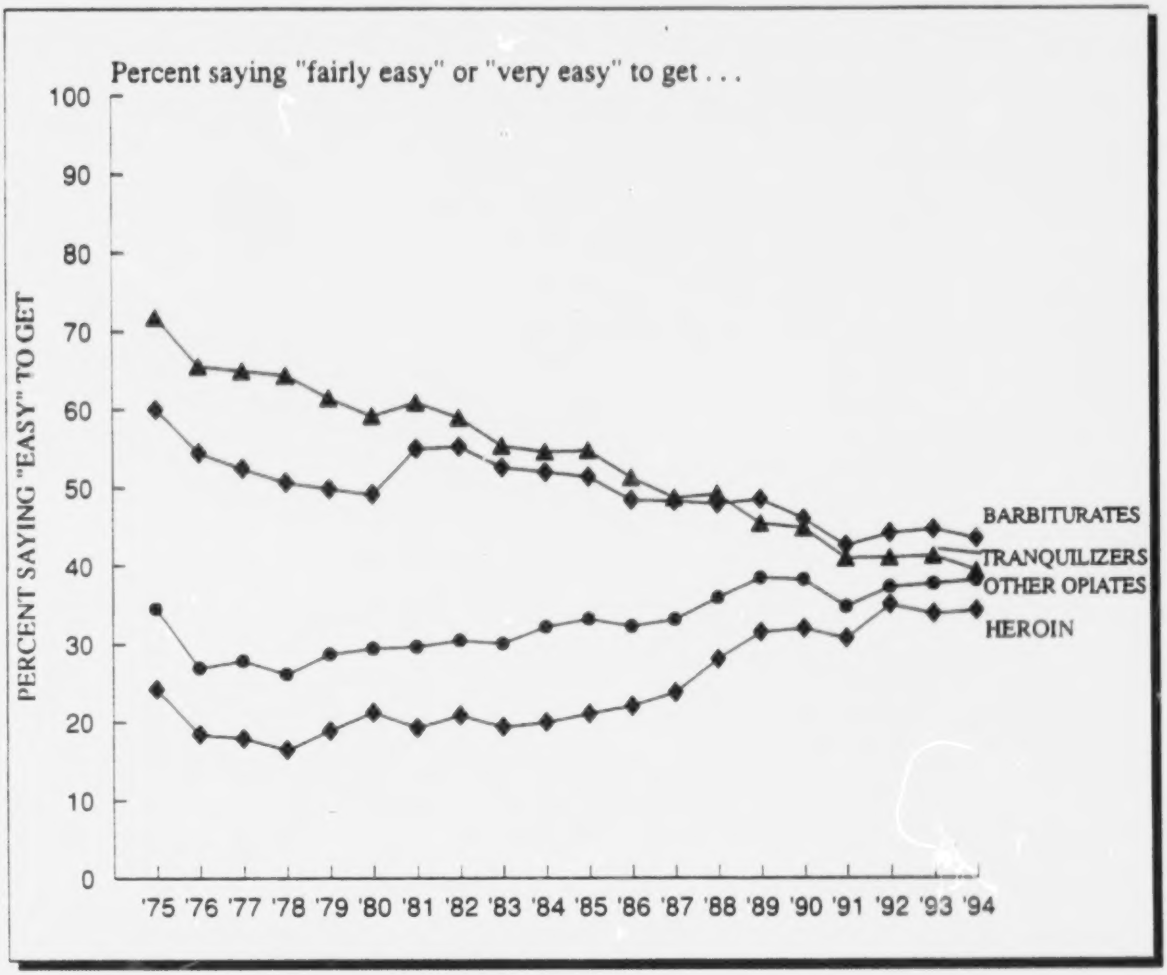
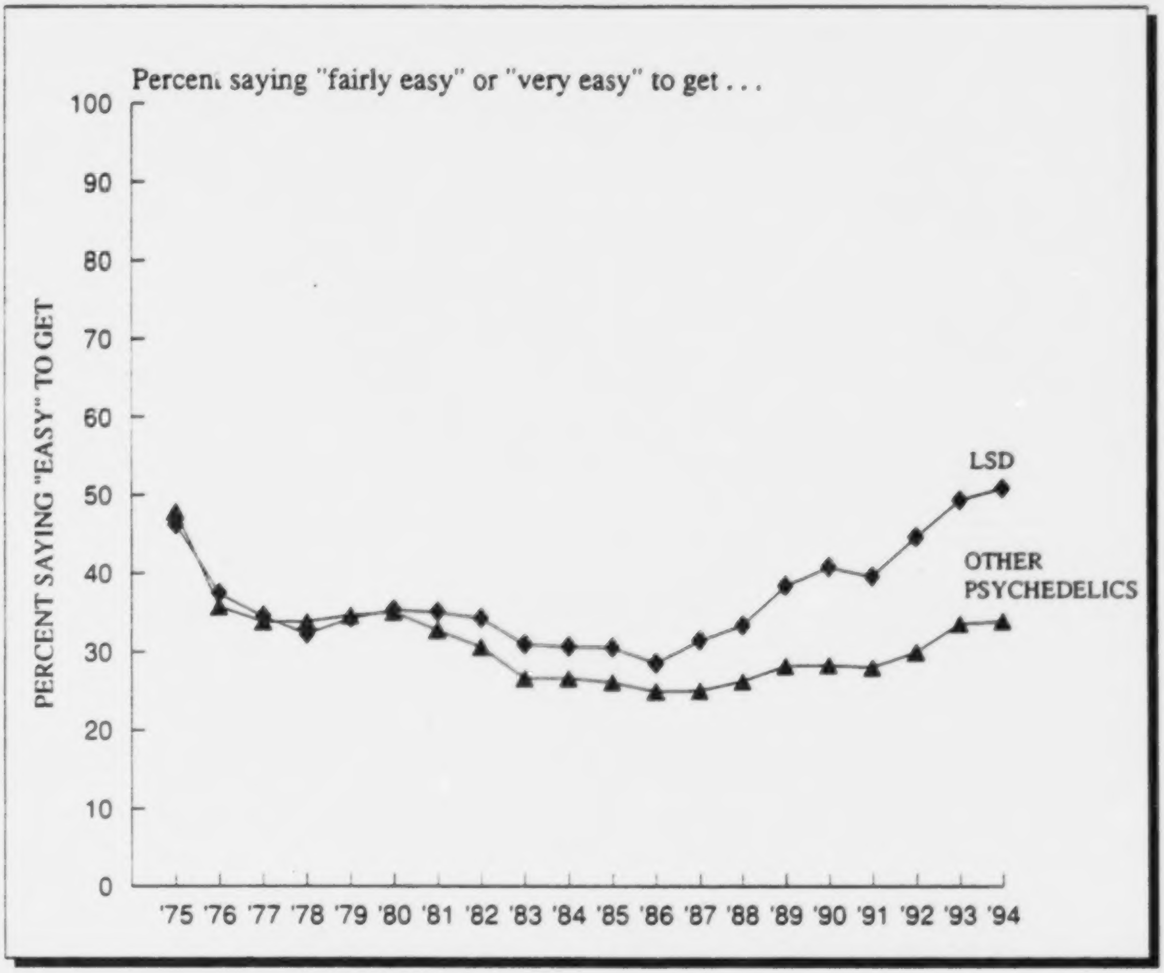


FIGURE 33c

Trends in Perceived Availability of Drugs for Twelfth Graders



- ***Crack*** availability has only been asked since 1987; it has fluctuated between 40% and 47% (Figure 33a).

- The use of ***tranquilizers*** declined fairly steadily between 1977 and 1992, and perceived availability declined by a smaller proportion over the same period. From 1992 to 1993 availability stayed level at 41% before dropping to 39% in 1994.

- The perceived availability of ***LSD*** dropped sharply between 1975 and 1986, from 46% to 29% saying the drug would be "fairly easy" or "very easy" to get. Since then availability rose to 41% by 1991. In 1992 availability increased sharply to 45%, and it has risen steadily since, to 51% in 1994. (See Table 30.)

- The availability of ***other psychedelics*** dropped sharply between 1975 and 1978, stayed steady through 1981, declined again through 1986, and then began a gradual increase through 1994, when 34% of the seniors claimed they would be fairly easy to get.

- Between 1979 and 1987, self-reported use of ***PCP*** dropped substantially, before stabilizing at a very low level. However, availability rose from 1987 (when it was first measured) to 1992, before stabilizing.

- For the decade between 1976 and 1986 there was little change in the perceived availability of ***heroin*** (Figure 33b). A significant increase occurred between 1986 and 1989 followed by little change through 1991. In 1992, perceived availability again increased significantly (to 35%). It is still perceived as being fairly easy or very easy to get by fully one-third (34%) of the twelfth graders. The 1992 through 1994 figures are the highest attained since the study began. Despite these changes in availability, however, annual usage rates among seniors have remained stable at around 0.5%, since 1979.

- ***Other opiates*** have shown a very slight, gradual, upward shift in availability, from 29% in 1980 to 38% in 1989, with little change since.

- Recent (past month) users might be assumed to be the most knowledgeable about actual availability on the street; when the sample is restricted to these users, all these trends just described for perceived availability are similar. (Data not shown.)

Trends in Perceived Availability for Eighth and Tenth Graders

Because comparable questions on availability have only been asked of eighth and tenth graders since 1992, little trend information is available.

- In 1993 eighth graders showed no significant change in perceived availability of the illicit drugs (Table 29), but tenth graders showed significant increases for ***marijuana*** and ***amphetamines***. In 1994 both eighth and tenth graders showed substantial increases in perceived availability of marijuana. These increases may well reflect the increase in the proportions in both grades having friends who use.

- There was no significant change in the very high level of availability of ***cigarettes*** to tenth graders; 90% say they would be "fairly easy" or "very easy" to get. Among eighth graders, three-quarters (76%) say cigarettes would be "fairly easy" or "very easy" to get–a fact which has changed little since 1992.

- There was no significant change in the very high levels of ***alcohol*** availability for tenth graders (90%) or for eighth graders (75%).

The Importance of Supply Reduction vs. Demand Reduction

- Overall, it is important to note that ***supply reduction*** does not appear to have played a major role in perhaps the two most important downturns in drug use which have occurred to date–namely, those for ***marijuana*** and ***cocaine***. (See Figures 23 and 24.) In the case of cocaine, perceived availability actually rose during much of the period of downturn in use. These data are corroborated by data from the Drug Enforcement Administration on trends in the price and purity of cocaine on the streets. In the case of marijuana, availability remained almost universal to this age group over the last 18 years, while use dropped substantially until 1993. Similarly, ***amphetamine*** use declined appreciably since 1981 with only a modest corresponding change in perceived availability. Finally, ***heroin*** use has not risen among seniors even though availability increased substantially.

- What *has* changed dramatically are young peoples' beliefs about the dangers of using ***marijuana*** and ***cocaine***; and, as we have been saying for some years, we believe these changes have led to a decrease in use directly through their impact on the young peoples' demand for these drugs, and indirectly through their impact on personal disapproval and subsequently on peer norms. Because the perceived risk of ***amphetamine*** use was not changing much when amphetamine use was declining substantially (1981-1986), other factors must help to account for the decline in demand for that class of drugs—quite conceivably a displacement to cocaine. Because the three classes of drugs (marijuana, cocaine and amphetamines) have shown *different* patterns of change, it is highly unlikely that a general factor (e.g., a general shift against drug use) can explain their various trends.

The recent turnaround in ***marijuana*** use among all grades surveyed adds more compelling evidence to this interpretation. It was neither preceded, nor accompanied, by any increase in perceived availability, but it was *both* preceded, and accompanied, by a decrease in perceived risk. Peer disapproval dropped sharply in 1993, and again sharply in 1994, *after* perceived risk began to change, consistent with our interpretation that perceived risk can be an important determinant of disapproval.

Chapter 10

OTHER FINDINGS FROM THE STUDY

Each year this section presents additional recent findings from the Monitoring the Future study. The first two analyses included here–on the use of nonprescription stimulants and daily marijuana use–have not been reported elsewhere.

THE USE OF NONPRESCRIPTION STIMULANTS

As is discussed in other chapters of this report, between 1979 and 1981 we observed a substantial increase in reported stimulant use by high school students. We had reason to believe that a fair part of that increase was attributable to nonprescription stimulants of two general types–"look-alike" drugs (pseudo-amphetamines, usually sold by mail order, which look like, and often have names that sound like, real amphetamines) and over-the-counter stimulants (primarily diet pills and stay-awake pills). These drugs usually contain caffeine, ephedrine, and/or phenylpropanolamine as their active ingredients.

Beginning with the 1982 survey we introduced new questions on some questionnaire forms in order to assess more accurately the use of amphetamines as well as to assess the use of the "look-alikes," diet pills, and stay-awake pills of the nonprescription variety. For example, on one of the five twelfth questionnaire forms in 1982-1988, and on one of six questionnaire forms beginning in 1989, respondents were asked to indicate on how many occasions (if any) they had taken nonprescription diet pills such as Dietac™, Dexatrim™, and Prolamine™ (a) in their lifetime, (b) in the prior twelve months, and (c) in the prior thirty days. (These correspond to the standard usage questions asked for all drugs.) Similar questions were asked about nonprescription stay-awake pills (such as No-Doz™, Vivarin™, Wake™, and Caffedrine™) and the "look-alike" stimulants. (The latter were described at some length in the actual question.)

On three of the five questionnaire forms in 1982 and 1983 (and in all questionnaire forms thereafter) respondents were also asked about their use of prescription amphetamines, with very explicit instructions to exclude the use of over-the-counter and "look-alike" drugs.

Prevalence of Use in 1994 Among Seniors

- Tables 31a, 31b, and 31c give the prevalence levels for these various classes of stimulants. As can be seen, a substantial proportion of twelfth grade students (15%) have used over-the-counter ***diet pills*** and 4% have used them in just the past month. Some 0.5% of seniors are using them daily.

- Based on the data presented earlier in this report, we know that very similar proportions are using actual ***amphetamines***, 16% lifetime, 4% monthly, and 0.2% daily prevalence.

TABLE 31a

Non-Prescription Diet Pills: Trends in Twelfth Graders' Lifetime, Annual, and Thirty-Day Prevalence, by Sex[a]

(Entries are percentages)

Prevalence	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Lifetime														
Total	29.6	31.4	29.7	28.7	26.6	25.5	21.5	19.9	17.7	17.2	15.0	14.8	14.9	+0.1
Males	16.5	17.4	14.8	14.8	13.1	12.4	9.4	9.1	7.8	5.9	6.4	5.6	4.5	-1.1
Females	42.2	44.8	43.1	41.5	39.7	38.3	32.6	30.2	28.3	28.1	23.2	23.3	23.7	+0.4
Annual														
Total	20.5	20.5	18.8	16.9	15.3	13.9	12.2	10.9	10.4	8.8	8.4	8.0	9.3	+1.3
Males	10.7	10.6	9.2	9.0	6.9	6.4	4.9	4.3	4.3	3.0	4.3	3.2	2.5	-0.7
Females	29.5	30.0	27.5	24.4	23.2	21.1	18.8	17.2	16.7	14.2	12.2	12.3	14.9	+2.6
Thirty-Day														
Total	9.8	9.5	9.9	7.3	6.5	5.8	5.1	4.8	4.3	3.7	4.0	3.8	4.2	+0.4
Males	5.0	4.0	4.8	3.7	3.2	2.7	1.8	2.3	1.9	1.4	1.9	1.9	1.3	-0.6
Females	14.0	13.7	14.2	10.7	9.6	8.9	8.3	7.0	6.7	5.5	5.8	4.9	6.4	+1.5

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss= .01, sss = .001.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on one questionnaire form. Total N for 1982-1989 is approximately 3,300. For 1990-1994, the total N is approximately 2,600.

TABLE 31b

Stay-Awake Pills: Trends in Twelfth Graders' Lifetime, Annual, and Thirty-Day Prevalence, by Sex[*]

(Entries are percentages)

Prevalence	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Lifetime														
Total	19.1	20.4	22.7	26.3	31.5	37.4	37.4	36.3	37.0	37.0	35.6	30.5	31.3	+0.8
Males	20.2	22.3	23.2	28.0	32.0	34.8	38.0	37.7	35.3	36.0	34.4	30.4	30.2	-0.2
Females	16.9	18.2	21.7	24.9	31.3	39.4	36.7	35.1	39.2	37.9	37.3	30.1	32.2	+2.1
Annual														
Total	11.8	12.3	13.9	18.2	22.2	25.2	26.4	23.0	23.4	22.2	20.4	19.1	20.7	+1.6
Males	12.8	13.8	15.4	19.7	22.3	25.5	27.6	24.8	22.3	22.3	20.9	19.7	20.3	+0.6
Females	10.0	10.5	12.5	17.0	22.2	25.0	25.2	21.7	24.5	22.0	20.2	17.6	20.4	+2.8
Thirty-Day														
Total	5.5	5.3	5.8	7.2	9.6	9.2	9.8	8.5	7.3	6.8	7.2	7.0	6.3	-0.7
Males	6.0	5.5	6.2	7.7	9.5	9.3	11.0	10.0	7.1	7.6	7.8	7.9	5.9	-2.0
Females	4.7	4.5	5.5	6.7	9.3	9.1	8.6	6.9	7.3	5.5	6.5	5.5	5.8	+0.3

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

SOURCE: The Monitoring the Future Study, the Univesity of Michigan.

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[*] Data based on one questionnaire form. Total N for 1982-1989 is approximately 3,300. For 1990-1994, the total N is approximately 2,600.

TABLE 31c

Look-Alikes: Trends in Twelfth Graders' Lifetime, Annual, and Thirty-Day Prevalence, by Sex[a]

(Entries are percentages)

Prevalence	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93–'94 change
Lifetime														
Total	15.1	14.8	15.3	14.2	12.7	11.9	11.7	10.5	10.7	8.9	10.1	10.5	10.3	-0.2
Males	13.6	14.2	14.1	14.1	12.3	10.9	10.4	10.1	11.6	8.3	11.0	10.1	9.0	-1.1
Females	15.1	14.4	15.2	13.8	12.6	12.3	12.1	10.2	9.9	8.8	9.3	10.4	11.2	+0.8
Annual														
Total	10.8	9.4	9.7	8.2	6.9	6.3	5.7	5.6	5.6	5.2	5.4	6.2	6.0	-0.2
Males	9.5	9.2	9.7	8.3	6.5	6.4	4.2	6.1	6.6	4.9	6.2	6.4	5.9	-0.5
Females	10.7	8.6	8.5	7.8	6.7	6.0	6.3	5.0	4.6	4.7	4.5	5.4	5.7	+0.3
Thirty-Day														
Total	5.6	5.2	4.4	3.6	3.4	2.7	2.7	2.4	2.3	2.1	2.4	2.7	2.4	-0.3
Males	4.0	4.5	4.5	3.8	3.4	2.4	1.7	2.3	2.6	2.0	2.5	2.0	2.5	+0.5
Females	5.2	5.4	3.8	3.1	3.0	2.7	3.0	2.2	1.8	1.8	2.2	2.9	2.0	-0.9

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a]Data based on one questionnaire form. Total N for 1982-1989 is approximately 3,300. For 1990-1994, the total N is approximately 2,600.

- Fewer students knowingly use the ***look-alikes*** than use diet pills or amphetamines (adjusted): 10% lifetime, 2% monthly, and 0.3% daily prevalence. Of course, it is probable that some proportion of those who think they are getting real amphetamines have actually been sold look-alikes, which are far cheaper for drug dealers to purchase.

- Currently, ***stay-awake pills*** are the most widely used stimulant: 31% lifetime, 6% monthly, and 0.4% daily prevalence.

- In 1983 the newly revised question on amphetamine use yielded prevalence estimates which were about one-quarter to one-third lower than the original version of the question, indicating that some distortion in the unadjusted estimates was occurring as a result of the inclusion of some nonprescription stimulant use. We believe that there should be little or no such distortion in recent years, primarily due to the improvement in the questions, but also due to the fact that there has been a considerable decline in the use of diet pills and look-alikes, as discussed below.

Subgroup Differences

- Figure 34 shows the prevalence figures for these drug classes for ***males and females*** separately. It can be seen that the use of ***diet pills*** is dramatically higher among females than among males. In fact, the absolute prevalence levels for females are impressively high, 24% report some experience with them and 6%–or one in every seventeen females–report use in just the last month. For all other stimulants the prevalence rates for both sexes are fairly close.

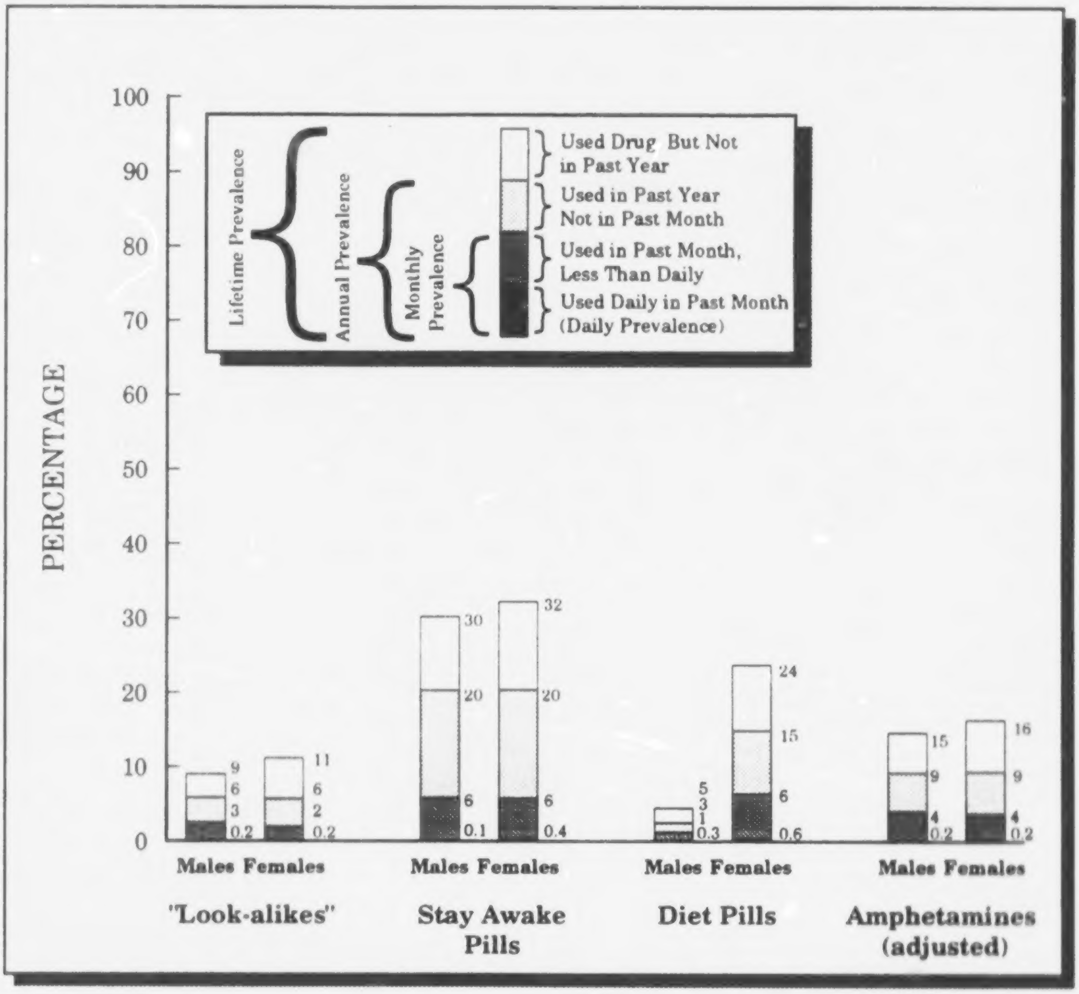
- A similar comparison for those planning four years of college (referred to here as the "college-bound") and those who are not, has shown some differences as well (data not shown). This year's results show only a very slight difference between these two groups in their use of ***stay-awake pills***; annual prevalence is 20% for noncollege-bound, 21% for college-bound. Use of ***diet pills*** is slightly higher for the noncollege-bound; annual prevalence is 11%, vs. 9% for the college-bound. Use of the ***look-alikes*** is also slightly higher among the noncollege-bound (8% vs. 6%).

- There have not been any dramatic ***regional differences*** in the use of diet pills, but the 1992-1994 data show slightly higher rates for "look-alikes" and stay-awake pills in the North Central region.

- While all three nonprescription stimulants used to have lowest prevalence in the large cities, the differences by urbanicity are now minor.

FIGURE 34

Prevalence and Recency of Use, by Sex
Amphetamines and Non-Prescription Stimulants
Twelfth Graders, 1994



- The use of all of the nonprescription stimulants (i.e., ***diet pills***, ***stay-awake pills***, and "***look-alikes***") is substantially higher among those who have had experience with the use of illicit drugs than among those who have not, and highest among those who have become most involved with illicit drugs (see Table 32). For example, only 3% of those who have abstained from any illicit drug use report ever having used a ***look-alike*** stimulant, compared to 6% of those who report having used only marijuana and 32% of those who report having used some illicit drug other than marijuana.

Trends in Use Among Seniors

- Because these questions were new in 1982, trends can be assessed directly only since then. However, it is worth noting that the 1982 figures for ***amphetamines adjusted*** (i.e., excluding nonprescription stimulants) were higher than the unadjusted figures for all years prior to 1980. (See Tables 11 through 14.) This suggests that there was indeed an increase in amphetamine use between 1979 and 1982–or at least an increase in what, to the best of the respondent's knowledge, were amphetamines. Not all of the increase was an artifact.

- During the 1980s there were increased legislative and law enforcement efforts to curb the manufacture and distribution of ***look-alike pills***. Perhaps as a result, the use of these pills decreased from 1982 to 1991; for example, annual prevalence went from 10.8% in 1982 to 5.2% in 1991. Most of the decline occurred among those who have had experience with illicit drugs other than marijuana–the group primarily involved in the use of "look-alikes". Since 1991 use has risen a bit (Table 31c).

- Use of ***diet pills*** decreased between 1983 and 1993. Over that interval annual prevalence fell from 21% to 8%. Nearly all of this decline occurred among the group who had used illicit drugs other than marijuana. In 1994 use rose slightly, but not significantly (Table 31a).

- The use of ***stay-awake pills*** increased significantly in the early to mid-1980s; annual prevalence increased from 12% in 1982 to 26% in 1988. Since then it dropped back somewhat, to 19% in 1993. (Both the increase and decrease occurred primarily among those who have had experience in the use of illicit drugs.) In 1994, use rose slightly, but not significantly (Figure 31b).

- All subgroups (defined by sex, college plans, region of the country, and population size) showed similarly large increases from 1982 to 1988 in their use of ***stay-awake pills***. All subgroups decreased in annual prevalence between 1988 and 1992, though there has been rather little decrease in the North Central region.

TABLE 32

Percentage of Twelfth Graders in Each Category of an Illicit Drug Use Index Who Have Tried Various Over-the-Counter Stimulants 1994

	Lifetime Illicit Drug Use		
Lifetime use of . . .	No Use	Marijuana Only	Other Illicit Drugs
Diet Pills	9.5[a]	11.2	32.3
Stay-Awake Pills	17.8	35.2	61.1
"Look-Alikes"	2.7	5.9	32.3
Approx. N =	*1319*	*476*	*578*

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] This means that, of those who have never used an illicit drug, 9.5 percent have used a diet pill at least once.

- Subgroup differences in trends for ***diet pills*** and ***look-alikes*** for the most part reflect the overall trends.

THE USE OF MARIJUANA ON A DAILY BASIS

In past reports in this series, we summarized a number of findings regarding daily marijuana users, including what kind of people they are, how use changes after high school for different subgroups, and what daily users see to be the negative consequences of their use.[41] In 1982 a special question segment was introduced into the study in one of the five twelfth grade questionnaire forms in order to secure more detailed measurement of individual patterns of daily use. (This question has been included in one of six forms since 1988.) More specifically, respondents were asked (a) whether at any time during their lives they had ever used marijuana on a daily or near-daily basis for at least a month and, if so, (b) how recently they had done that, (c) when they first had done it, and (d) how many total months they had smoked marijuana daily, cumulating over their whole lifetime. The results of our analyses of these questions follow.

Lifetime Prevalence of Daily Marijuana Use among Seniors

- ***Current daily marijuana use***, defined as use on twenty or more occasions in the past thirty days has fluctuated widely since the study began, as we know from the trend data presented earlier in this report. It rose from 6.0% among seniors in 1975 to 10.7% in 1978, declined to 1.9% by 1992, then began to increase again. By 1994, it had risen to 3.6%, the highest prevalence rate since 1986.

- Since 1982, we have found the ***lifetime prevalence of daily marijuana use*** for a month or more to be far higher than current daily marijuana use–e.g., at 11.3% or one in every nine seniors in 1994 vs. 3.6% for current daily use. In other words, the proportion who describe themselves as having been daily or near-daily users at some time in their lives is three to four times as high as the number who describe themselves as current daily users. (However, we believe it very likely that this ratio has changed dramatically over the life of the study as a result of the large secular trends in daily use. Therefore, it would be inaccurate to extrapolate to the class of 1978, for example, and deduce that their lifetime prevalence of daily use was four times their 10.7% current use figure that year. An investigation of data from a follow-up panel of the class of 1978 confirms this assertion.)

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[41] For the original reports see the following, which are available from the author: Johnston, L.D. (1981). Frequent marijuana use: Correlates, possible effects, and reasons for using and quitting. In R. DeSilva, R. Dupont, & G. Russell (Eds.), *Treating the marijuana dependent person*, New York: The American Council on Marijuana. Also see Johnston, L.D. (1982). A review and analysis of recent changes in marijuana use by American young people. In *Marijuana: The national impact on education*. New York: The American Council on Marijuana.

- Utilizing data collected in 1989 from follow-up panels from the earlier graduating classes of 1976 through 1988, we found that the lifetime prevalence of daily marijuana use for these graduates (ranging in age from about 19 to 31) was 20%. Approximately one-fourth of the older portion of that group–graduates from the classes of 1976 through 1979–indicated having been daily marijuana users for a month or more at some time in their lives.

Grade of First Daily Marijuana Use

- Of those 1994 seniors who were daily marijuana users at some time (i.e., 11.3% of the sample), nearly half (49%, or 5.5% of all seniors) began that pattern of use before tenth grade. However, the secular trends in daily use must be recalled. Active daily use reached its peak among seniors in 1978, when the 1990 graduating class was in kindergarten. Thus we are confident that different graduating classes show different age-associated patterns of onset.

- A high proportion of all seniors who were to begin daily marijuana use by the end of high school had done so by the end of grade ten (71% of the eventual daily users). The percentages of all seniors who started daily marijuana use in each grade level is presented in Table 33.

Recency of Daily Marijuana Use by Seniors

- About four-fifths (80%) of those who report ever having been daily marijuana users (for at least a one-month interval) have used that frequently in the past year, while about one-fifth (21%) of them say they last used that frequently "about two years ago" or longer. Fully 27% of all who had ever been daily users (or 3.0% of the entire sample) classified themselves as having used daily or almost daily in the past month (the period for which we define *current daily users*). Incidentally, our operational definition of current daily users (20 or more uses in the last 30 days) yields 3.6% in 1994, very close to the 3.0% based on the respondents' own definition.

Duration of Daily Marijuana Use by Seniors

- It seems likely that the most serious long-term health consequences associated with marijuana use will be directly related to the duration of heavy use, and in the late 1970's there was considerable concern that a large population of chronic heavy users would evolve. Thus a question was introduced which asked the respondent to estimate the *cumulative* number of months he or she has smoked marijuana daily or nearly daily. While hardly an adequate measure of the many different possible cross-time patterns of use–a number of which may eventually prove to be important to distinguish–it does provide a gross measure of the total length of exposure to heavy use.

- Table 33 gives the distribution of answers to this question. It shows that roughly two-thirds (69%) of those 1994 seniors with any daily marijuana use experience reported that their period(s) of daily use totalled "about one year" or less. Less than a third (31%) have used less than three months cumulatively. One-quarter (25%, or 2.8% of *all* seniors) have used marijuana daily "about two years" or more cumulatively.

Subgroup Differences

- There is now a fair ***sex difference*** in the proportion having ever been a daily user–13.3% for males and 8.5% for females; and the cumulative duration of daily use is somewhat longer for the males.

- Whether or not the student has ***college plans*** is strongly related to lifetime prevalence of daily marijuana use, as well as to current prevalence. Of those planning four years of college, 8.6% had used daily compared with 16.1% of those without such plans. And the college-bound users show a distinctly shorter cumulative duration of use, with a lower proportion of them still using daily. Among those in each group who did use daily, the age-at-onset pattern is younger for the noncollege-bound (Table 33).

- At present there are no significant ***regional differences*** in lifetime prevalence of daily marijuana use.

- The differences in lifetime daily use associated with ***urbanicity*** are modest (as is true for current daily use). Lifetime prevalence of daily marijuana use is 9.9% in the large cities, 13.3% in the smaller cities, and 8.4% in the nonurban areas. Current daily use is 3.9% in the large cities, 3.8% in the smaller cities, and 2.8% in the nonurban areas.

Trends in Use of Marijuana on a Daily Basis

- Table 34 presents trend data on the lifetime prevalence of daily use for a month or more. It shows a decline since 1982 when this measure was first used, through 1992–from 21% to 8%. By 1994 it had risen to 11%.

- Between 1982 and 1992, the decline in ***lifetime daily marijuana use*** was slightly stronger among males (20% to 8%) than among females (from 18% to 8%); and the absolute drop was larger in the noncollege-bound group (23% to 11%) than among the college-bound

TABLE 33

Daily Marijuana Use: Responses to Selected Questions by Subgroups Twelfth Graders, 1994

	Total	Sex		4-Year College Plans		Region				Population Density		
		Male	Female	No	Yes	North East	North Central	South	West	Large SMSA	Other SMSA	Non-SMSA
Q *Thinking back over your whole life, has there ever been a period when you used marijuana or hashish on a daily, or almost daily, basis for at least a month?*												
No	88.7	86.7	91.5	83.9	91.4	87.8	89.0	88.2	89.8	90.1	86.7	91.6
Yes	11.3	13.3	8.5	16.1	8.6	12.2	11.0	11.8	10.2	9.9	13.3	8.4
Q *How old were you when you first smoked marijuana or hashish that frequently?*												
Grade 6 or earlier	0.6	0.8	0.2	0.3	0.6	0.2	0.9	0.5	0.3	0.6	0.5	0.7
Grade 7 or 8	2.0	1.9	2.0	3.5	1.4	1.2	2.0	2.9	1.3	1.3	2.6	1.3
Grade 9 (Freshman)	2.9	3.4	2.2	2.9	2.4	3.8	2.9	3.2	1.6	3.4	3.2	2.2
Grade 10 (Sophomore)	2.6	2.8	2.0	5.5	1.5	3.4	2.8	2.0	2.7	1.8	3.2	2.0
Grade 11 (Junior)	2.4	3.1	1.7	3.4	1.8	2.6	1.9	2.6	2.8	1.8	2.8	2.1
Grade 12 (Senior)	0.8	1.4	0.4	0.5	0.9	0.9	0.5	0.6	1.5	1.1	1.0	0.1
Never used daily	88.7	86.7	91.5	83.9	91.4	87.8	89.0	88.2	89.8	90.1	86.7	91.6
Q *How recently did you use marijuana or hashish on a daily, or almost daily, basis for at least a month?*												
During the past month	3.0	3.8	1.7	3.9	2.0	3.0	3.7	3.0	2.1	1.9	3.3	3.2
2 months ago	1.4	2.2	0.6	1.4	1.3	1.0	1.2	1.6	1.4	2.1	1.6	0.3
3 to 9 months ago	3.0	3.3	2.4	4.6	2.2	2.8	2.4	3.3	3.8	2.4	4.1	1.4
About 1 year ago	1.6	1.7	1.5	3.8	1.0	2.9	1.6	1.2	1.1	1.5	1.6	1.6
About 2 years ago	1.5	1.6	1.3	0.9	1.4	1.5	1.2	1.8	1.3	0.9	1.9	1.0
3 or more years ago	0.9	0.8	1.0	1.5	0.7	1.0	0.9	1.0	0.6	1.0	0.9	0.8
Never used daily	88.7	86.7	91.5	83.9	91.4	87.8	89.0	88.2	89.8	90.1	86.7	91.6
Q *Over your whole lifetime, during how many months have you used marijuana or hashish on a daily or near daily basis?*												
Less than 3 months	3.5	4.6	2.5	6.3	2.6	3.1	2.6	3.5	5.0	2.5	4.5	2.2
3 to 9 months	2.9	3.1	2.6	4.7	2.2	2.7	2.9	3.5	2.1	2.5	3.6	2.0
About 1 year	1.4	1.7	1.1	1.5	1.0	2.6	1.1	1.1	1.5	1.4	1.5	1.3
About 1 and 1/2 years	0.7	0.9	0.2	0.7	0.2	1.2	0.7	1.0	0.1	0.8	0.8	0.5
About 2 years	1.5	1.5	1.2	0.9	1.6	1.4	1.9	1.3	1.2	1.5	1.6	1.2
About 3 to 5 years	1.2	1.3	0.8	1.8	0.8	1.2	1.8	1.2	0.1	1.0	1.2	1.2
6 or more years	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Never used daily	88.7	86.7	91.5	83.9	91.4	87.8	89.0	88.2	89.8	90.1	86.7	91.6
N =	*2545*	*1136*	*1288*	*491*	*1834*	*447*	*682*	*914*	*502*	*526*	*1360*	*659*

NOTES: Entries are percentages which sum vertically to 100 percent. '*' indicates less than .05 percent.

SOURCE: The Monitoring the Future Study, the University of Michigan

TABLE 34

Trends in Daily Use of Marijuana in Lifetime by Subgroups, Twelfth Graders[a]

	Percent ever using daily for at least a month														Percent reporting first such use prior to tenth grade													
	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93-'94 change	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	'93-'94 change
All seniors	20.5	16.8	16.3	15.6	14.9	14.7	12.8	11.5	10.0	9.0	8.4	9.6	11.3	+1.7	13.1	11.1	10.9	8.8	8.5	8.9	7.8	7.6	6.7	6.4	5.6	5.2	5.5	+0.3
Sex																												
Male	20.1	18.1	17.2	17.7	16.6	16.2	14.8	12.7	10.6	10.5	8.3	10.7	13.3	+2.6	12.9	12.1	11.8	9.8	8.7	10.2	8.4	8.4	6.9	7.4	5.6	5.5	6.1	+0.6
Female	18.0	13.5	12.9	12.0	11.6	12.2	9.6	9.7	7.9	6.4	7.5	7.2	8.5	+1.3	11.5	8.3	8.0	6.5	6.6	7.1	6.6	6.0	4.9	4.4	5.0	4.1	4.4	+0.3
College Plans																												
None or under 4 yrs	22.5	20.3	18.9	19.6	17.2	18.0	14.5	15.3	12.8	11.5	11.2	11.6	16.1	+4.5	14.2	13.5	12.3	11.8	10.7	11.4	11.0	11.6	9.0	8.7	7.8	6.3	6.7	+0.4
Complete 4 yrs	13.8	10.5	10.7	10.6	11.0	11.1	9.8	9.1	7.4	6.5	5.9	7.7	8.6	+0.9	8.2	6.5	6.6	5.5	5.2	6.4	5.3	5.1	4.6	4.3	3.8	4.2	4.4	+0.2
Region																												
Northeast	25.1	20.4	24.1	20.9	21.5	17.0	13.1	14.6	10.4	10.3	8.7	12.0	12.2	+0.2	17.3	11.9	17.2	12.9	10.3	10.3	9.0	10.7	6.5	8.2	4.8	6.3	5.2	-1.1
North Central	21.1	15.9	12.8	16.3	11.3	12.7	10.3	13.4	10.8	8.4	8.0	9.3	11.0	+1.7	13.3	12.4	8.4	9.1	7.3	7.7	6.0	7.6	6.7	4.9	4.7	5.5	5.8	+0.3
South	15.7	12.7	14.0	8.9	11.3	11.9	10.9	8.1	8.7	7.4	5.9	8.3	11.8	+3.5	9.3	8.3	8.5	5.0	6.4	7.4	6.3	5.4	6.2	5.1	4.4	4.3	6.6	+2.3
West	20.8	21.4	17.6	18.5	18.3	19.7	19.0	12.3	11.0	11.3	13.4	10.4	10.2	-0.2	12.6	13.9	12.1	8.9	11.2	11.7	11.9	8.1	8.0	8.6	9.8	5.1	3.2	-1.9
Population Density																												
Large SMSA	23.8	20.0	19.4	18.1	17.0	16.7	14.0	10.6	8.3	7.2	8.4	8.6	9.9	+1.3	15.6	13.7	12.4	12.0	9.6	11.8	8.1	6.0	5.9	5.4	5.7	5.5	5.3	-0.2
Other SMSA	20.3	18.2	16.6	16.0	14.9	15.0	14.9	12.4	11.7	11.1	8.9	10.2	13.3	+3.1s	12.5	12.0	11.5	8.3	8.4	8.8	9.6	8.1	8.1	7.7	5.8	5.3	6.3	+1.0
Non-SMSA	17.9	12.6	13.2	12.8	13.2	12.2	7.6	10.4	8.2	7.1	7.6	9.6	8.4	-1.2	11.7	8.2	8.5	6.6	7.6	6.4	4.3	7.6	4.3	5.3	5.3	4.8	4.2	-0.6

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on one questionnaire form. Total N for 1982-1989 is approximately 3,300. For 1990-1994, the total N is approximately 2,600.

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(14% to 6%), although the proportional drop was not. In the turnaround which began in 1993, most of the increase appeared to occur among the males, who are now at 13%, and the noncollege-bound, who are now at 16%.

- Lifetime prevalence of daily marijuana use dropped in all four regions of the country after 1982. The decline was greatest in the Northeast, which had the highest rate in 1986. The current daily use measure shows the recent turnaround occurring in all regions; however, the recent increase in rates of lifetime daily use for at least a month shows up in only three regions, and not in the West.

- All three population density levels exhibited the long-term declines in lifetime daily use, and all have shown some increase in use over the past several years.

- Daily use prior to tenth grade has declined from 13% in the class of 1982 to 5% in the class of 1993. (This corresponds to people who were ninth graders between 1979 to 1989.) The decline halted in 1994, and as we know from the recent eighth grade survey results, will reverse. Subgroup trends may be examined in Table 34.

IMPACTS OF MARRIAGE, DIVORCE, AND PARENTHOOD ON THE DRUG USE OF YOUNG ADULTS

Monitoring the Future panel data, based on follow-up surveys of high school graduates, have been the basis for several reports examining how drug use changes as a result of different post-high school environments and experiences.[42] In a recently completed chapter we focused on several different "transition patterns" which occur for many young adults during the first ten years after high school: (a) transitions into marriage, (b) transitions out of marriage -- i.e., divorce or separation, and (c) transitions into parenthood. We present here a brief summary of findings presented in that chapter. We also include information from another forthcoming chapter which focuses on a wider range of transitions in drug use.[43]

Becoming married, and becoming a parent, are certainly among the most important transitions from late adolescence to young adulthood. These events are richly complex in their impacts, for they involve commitments to new roles and responsibilities; these in turn can lead to many changes in social contexts, often including housing, neighborhoods, friends, and acquaintances. In addition to such changes in friendship patterns and other social contacts, marriage generally involves an increase in the sheer amount of time devoted to being with the spouse, thus reducing time available for "hanging out" with friends.

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[42] See Bachman, J.G., O'Malley, P.M., & Johnston, L.D. (1984). Drug use among young adults: The impacts of role status and social environments. *Journal of Personality and Social Psychology, 47*, 629-645; and also Bachman, J.G. et al. (1992). *Changes in drug use during the post-high school years*. Monitoring the Future Occasional Paper No. 25. Ann Arbor, MI: Institute for Social Research.

[43] See Bachman, J.G., Wadsworth, K.N., O'Malley, P.M., Schulenberg, J., & Johnston, L.D. (Forthcoming). Marriage, divorce, and parenthood during the transition to young adulthood: Impacts on drug use and abuse. *In* J. Schulenberg, J. Maggs, & K. Hurrelmann (Eds.), *Health risks and developmental transitions during adolescence*. New York: Cambridge University Press. Also, Bachman, J.G., Johnston, L.D., O'Malley, P.M., & Schulenberg, J. (In press). Transitions in alcohol and other drug use and abuse during late adolescence and young adulthood. *In* J.A. Graber, J. Brooks-Gunn, & A.C. Petersen (eds.), *Transitions through adolescence: Interpersonal domains and contexts*. Hillsdale, NJ: Lawrence Erlbaum Associates.

In general, the above changes are likely to reduce opportunities and pressures to engage in excessive drinking or illicit drug use. Additionally, the personal commitment made to a spouse may further operate to inhibit these and other potentially damaging behaviors (including smoking). Most marriages involve frequent close contact with a caring partner, and that alone may be enough to tip the scales against such behaviors.

If being married contributes to lower than average drug use, for reasons outlined above, then becoming divorced might contribute to increased use -- at least to the extent of a "rebound" to the earlier levels of drug use more typical of single persons.

Impacts of Marriage on Drug Use

Our analyses clearly revealed that becoming married is associated with significant declines in drug use. Specifically, during the interval in which young adults went from single to married, there were declines in their total use of alcohol, their heavy drinking, their use of marijuana, and their use of cocaine. Even small proportions of cigarette smokers gave up the habit upon becoming married.

Figure 35, which provides the data on marijuana use, illustrates clearly that the declines in drug use were closely linked to the marriage transition. The figure also shows that the effects were much the same for those who married in their late teens or early twenties as for those who married in their mid-twenties. (Note that for each of the several subgroups shown in the figure, the interval in which marriage occurred is denoted by a heavy line.)

Figure 36 (left side), provides a different look at changes in drug use associated with marriage, this time focusing on instances of heavy drinking. Here we contrast those who remained single across three points in time, those who were married at all three points, and those who made the transition from single to married during the period. We can see again that the change in drug use occurs primarily during the period of actual marital transition, with one interesting exception: those who become engaged during one interval and then married during the next show some "anticipatory" change in instances of heavy drinking. Similar results were found for use of marijuana and use of cocaine.

It is important to keep in mind that other factors closely related to marriage, particularly pregnancy and parenthood, also appear to contribute to reduced drug use; however, earlier multivariate analyses clearly established that a considerable portion of the "marriage effect" on drug use remains after such other factors are controlled statistically.[44]

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[44] Bachman, J.G., O'Malley, P.M., Johnston, L.D., Rodgers, W.L., & Schulenberg, J. (1992). *Changes in drug use during the post-high school years.* (Monitoring the Future Occasional Paper No. 35). Ann Arbor, MI: Institute for Social Research.

Impacts of Divorce and Separation on Drug Use

Separation and divorce involve, in many respects, changes in roles and environments roughly opposite to those outlined above, and thus we anticipated that drug use might "rebound" after divorce to the levels associated with being single. The findings from our analyses confirmed this expectation; drug use rose significantly during the intervals in which individuals made transitions from married to divorced or separated. Specifically, the *increases* in proportions of users following divorce were approximately as large as the *decreases* associated with marriage. Figure 36 (right side) illustrates the rise in drug use (in this case instances of heavy drinking) associated with divorce or separation. Here, as was the case for marriage, very similar results were found for use of marijuana and use of cocaine.

OTHER DATA ON CORRELATES AND TRENDS

Hundreds of correlates of drug use, without accompanying interpretation, may be found in the series of annual volumes from the study entitled *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.*[45] For each year since 1975, a separate hardbound volume presents univariate and selected bivariate distributions on all questions contained in the study. A host of variables dealing explicitly with drugs–many of them not covered here–are contained in that series. Bivariate tables are provided for *all* questions each year distributed against an index of lifetime illicit drug involvement, making it possible to examine the relationship between hundreds of potential "risk factors" and drug use.

A special cross-time reference index is contained in each volume to facilitate locating the same question across different years. One can thus derive *trend* data on some 1500 to 2000 variables for the entire sample or for important subgroups (based on sex, race, region, college plans, and drug involvement).

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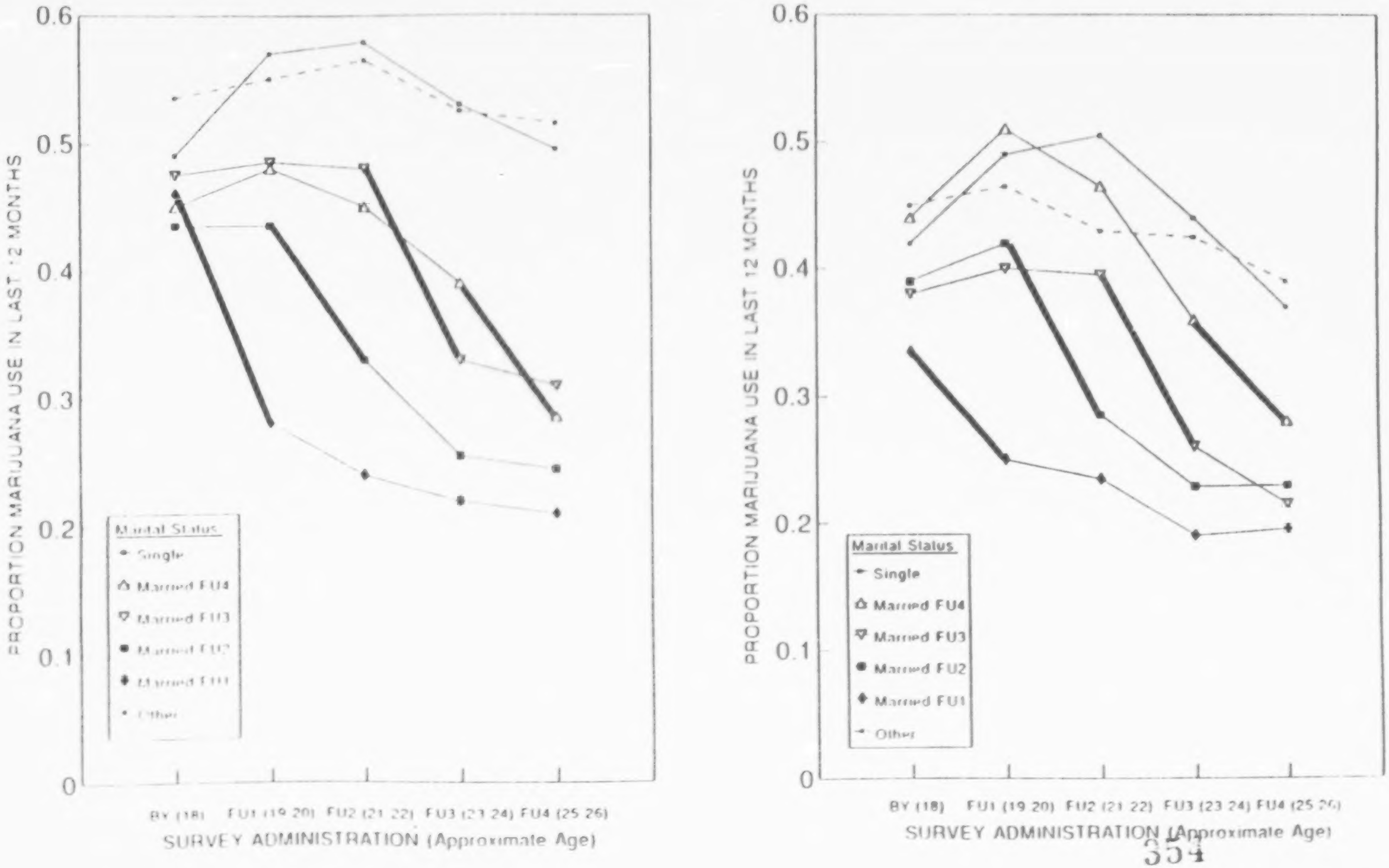
[45] This series is available from the Monitoring the Future Project, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan 48109.

Figure 35

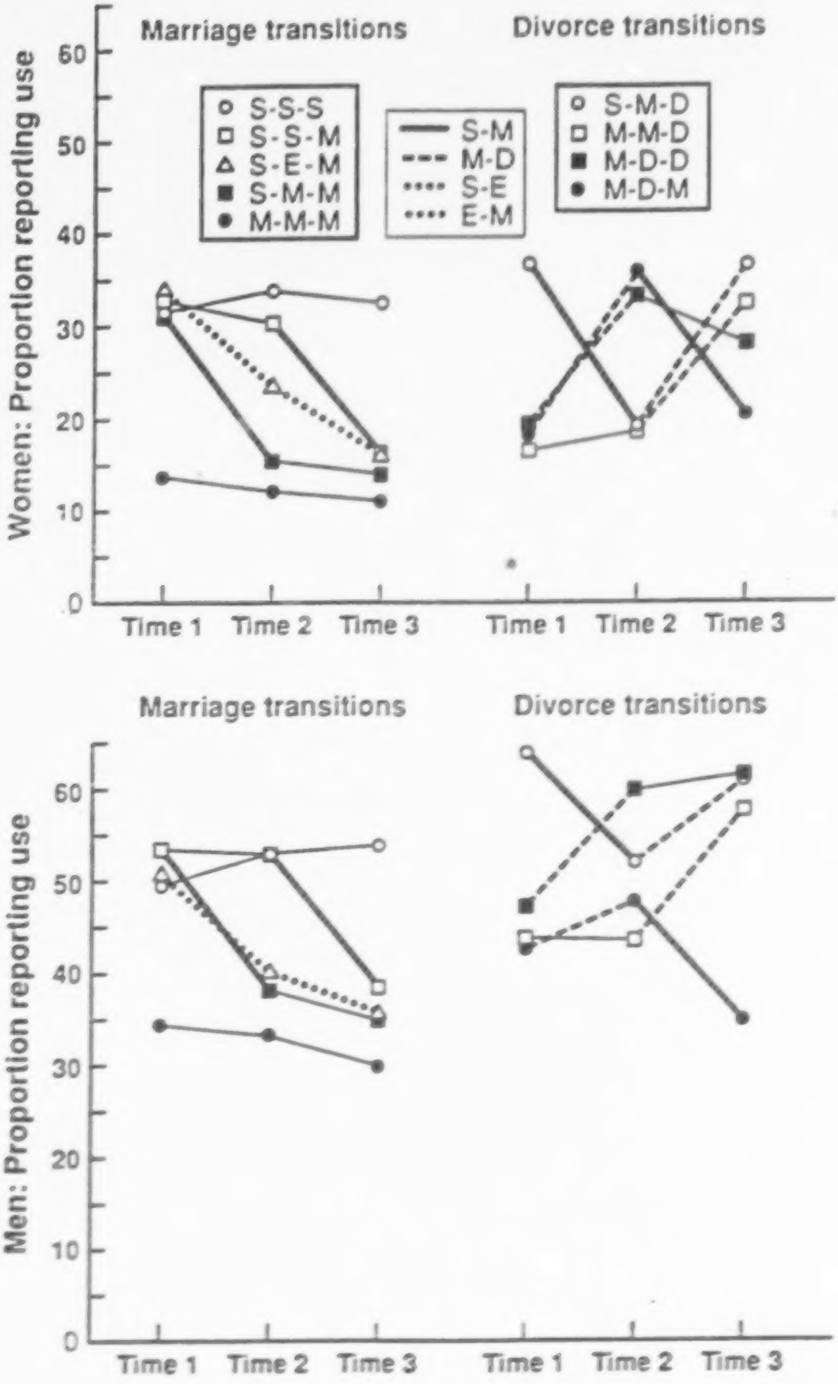


Marijuana Use Related to Marital Status, Males

Marijuana Use Related to Marital Status, Females

Figure 36

Drug Use Related to Marriage and Divorce:
Two-week Prevalence of Heavy Alcohol Use



Appendix A

PREVALENCE AND TREND ESTIMATES ADJUSTED FOR ABSENTEES AND DROPOUTS

One question which has arisen over the years in regard to this study has concerned the degree to which the prevalence and trend estimates derived from twelfth graders are an accurate reflection of the reality which pertains to all young people who would be in the same class or age cohort, including those who have dropped out of school by senior year. In 1985 we published an extensive chapter on this topic in a volume in the NIDA Research Monograph series.[46] We will attempt in this Appendix to summarize the main points relevant to this issue of sample coverage.

First, it should be noted that two segments of the entire class/age cohort are missing from the data collected each year from seniors: those who are still enrolled in school but who are absent the day of data collection (the "absentees") and those who will not graduate from high school (the dropouts). The absentees constitute virtually all of the nonrespondents shown in the response rate given in Table 2 in Chapter 3 of this volume (since refusal rates are negligible) or about 18% of all seniors (or 15% of the class/age cohort). Based on our review of available Census data, dropouts account for approximately 15% of the class/age cohort.

The methods we used to estimate the prevalence rates for these two missing segments are summarized briefly here. Then, the effects of adding in these two segments to the calculation of the overall prevalence rates for two drug classes are presented along with the impact on the trend estimates. Two illicit drugs have been chosen for illustrative purposes: marijuana, the most prevalent of the illicit drugs, and cocaine, one of the more dangerous and less prevalent drugs. Estimates for high school seniors are presented for both lifetime and 30-day prevalence for each drug.

CORRECTIONS FOR LOWER GRADE LEVELS

Before estimates of corrections for seniors are discussed, it should be noted that the twelfth grade represents the "worst case" of underestimations. Rates of dropping out and absenteeism are lower for the other two grades, eighth and tenth. With respect to dropping out, only a very few members of an age cohort have ceased attending school by grade eight, when most are age 13 or 14. Most tenth graders are age 15 or 16, and Census data indicate that only a small proportion (less than 5%) would have dropped out by then.[47] Thus, any correction for the missing dropouts should be negligible at eighth grade, and quite small at tenth grade.

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[46] Johnston, L.D., & O'Malley, P.M. (1985). Issues of validity and population coverage in student surveys of drug use. In B.A. Rouse, N.J. Casual, & L.G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85-1402). Washington, DC: U.S. Government Printing Office.

[47] According to the *Statistical Abstract of the United States 1994*, in 1992 the proportion of the civilian non-institutionalized population of the United States enrolled in school is 99.4% among 7-13 year olds and 99.1% among 14-15 year olds. It drops to 94.1% for 16-17 year olds combined, but there is probably a considerable difference between age 16 and age 17. Eighth graders in the spring of the school year are mostly (and about equally) 13-14 years old; while tenth graders are mostly (and about equally) 15 and 16 years old. These data, then, would suggest that dropouts are no more than 0.8% of eighth graders and 4.0% of tenth graders. U.S. Department of Commerce. (1994). *Statistical Abstract of the United States 1994: The National*

Regarding absentees, Table 2, presented earlier, shows that while absentees comprise 16% of the seniors who should be in school, they comprise only 12% of tenth graders and 11% of eighth graders. Thus, the eighth and tenth grade change in prevalence estimates which would result from corrections for this missing segment also would be considerably less than for twelfth graders.

In sum, the modest corrections which will result from the corrections for dropouts and absentees at the twelfth grade level set outside limits for what would be found at eighth and tenth grade; in fact, it is clear that the corrections would be considerably smaller at tenth grade and far smaller at eighth grade. Since the corrections described for twelfth graders turn out to be modest ones, we have not undertaken comparable corrections for eighth and tenth graders.

THE EFFECTS OF MISSING ABSENTEES

To be able to assess the effects of excluding absentees on the estimates of twelfth grade drug use, we included a question in the study which asks students how many days of school they had missed in the previous four weeks. Using this variable, we can place individuals into different strata as a function of how often they tend to be absent. For example, all students who had been absent 50% of the time could form one stratum. Assuming that absence on the day of the administration is a fairly random event, we can use the actual survey participants in this stratum to represent all students in their stratum, including the ones who happen to be absent that particular day. By giving them a double weight, they can be used to represent both themselves and the other 50% of their stratum who were absent that day. Those who say they were in school only one-third of the time would get a weight of three to represent themselves plus the two-thirds in their stratum who were not there, and so forth. Using this method, we found that absentees as a group have appreciably higher than average usage levels for all licit and illicit drugs. However, looking at 1983 data, we found that their omission did not depress any of the prevalence estimates in any of the drugs by more than 2.7 percentage points, because they represent such a small proportion of the total target sample. Considering that a substantial proportion of those who are absent likely are absent for reasons unrelated to drug use–such as illness and participation in extracurricular activities–it may be surprising to see even these differences. In any case, from the point of view of instruction policy or public perceptions, the small "corrections" would appear to be of little or no significance. (The correction in 1983 across all 13 drugs in lifetime prevalence averaged only 1.4 percentage points.) Further, such corrections should have virtually no effect on cross-time trend estimates unless the rate of absenteeism was changing appreciably; and we find no evidence in our data that it has. Put another way, the presence of a slight underestimate which is constant across time should not influence trend results. Should absentee rates start changing, then it might be argued that such corrections should be presented routinely.

Data Book. (114th Ed.) Washington, D.C.: Bureau of the Census. (p. 155)

THE EFFECTS OF MISSING DROPOUTS

Unfortunately, we cannot derive corrections from data gathered from seniors to impute directly the prevalence rates for dropouts, as we did for absentees, since we have no completely appropriate stratum from which we have sampled. We believe, based on our own previous research, as well as the work of others, that dropouts generally have prevalence rates for all classes of drugs substantially higher than the in-school students. In fact, the dropouts may be fairly similar to the absentees.

We have consistently estimated the proportion who fail to complete high school to be approximately 15%; Figure A-1 displays the completion rate for the years 1972 through 1994 based on Census data. As the figure indicates, completion rates (and the complement, dropout rates) have been quite constant over this interval for persons 20-24 years old.[48] (Younger age brackets are more difficult to use because they include some young people who are still enrolled in high school.) Monitoring the Future probably covers some small proportion of the 15%, since the survey of seniors takes place a few months before graduation, and not everyone will graduate. On the other hand, perhaps 1% to 2% of the age group which Census shows as having a diploma get it through a General Equivalency Degree and thus would not be covered in Monitoring the Future. (Elliott and Voss report this result for less than 2% of their sample in their follow-up study of 2617 ninth graders in California who were followed through their high school years.[49]) So these two factors probably cancel each other out. Thus, we use 15% as our estimate of the proportion of a class cohort not covered.

Extrapolating to dropouts from absentees. To estimate the drug usage prevalence rates for this group we have used two quite different approaches. The first was based on extrapolations from seniors participating in this study. Using this method we developed estimates under three different assumptions: that the difference between dropouts and the participating seniors in the study was equivalent to (a) the difference between absentees and the participating seniors, (b) one and one-half times that difference, and (c) twice that difference. The last assumption we would consider a rather extreme one.

The second general method involved using the best national data then available on drug use among dropouts–namely the National Household Surveys on Drug Abuse (NHSDA).[50] While these surveys have rather small samples of dropouts in the relevant age range in any given year, they should at least provide unbiased estimates for dropouts still in the household population.

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[48] U.S. Bureau of the Census (various years). *Current population reports, Series P-20*, various numbers. Washington, DC: U.S. Government Printing Office.

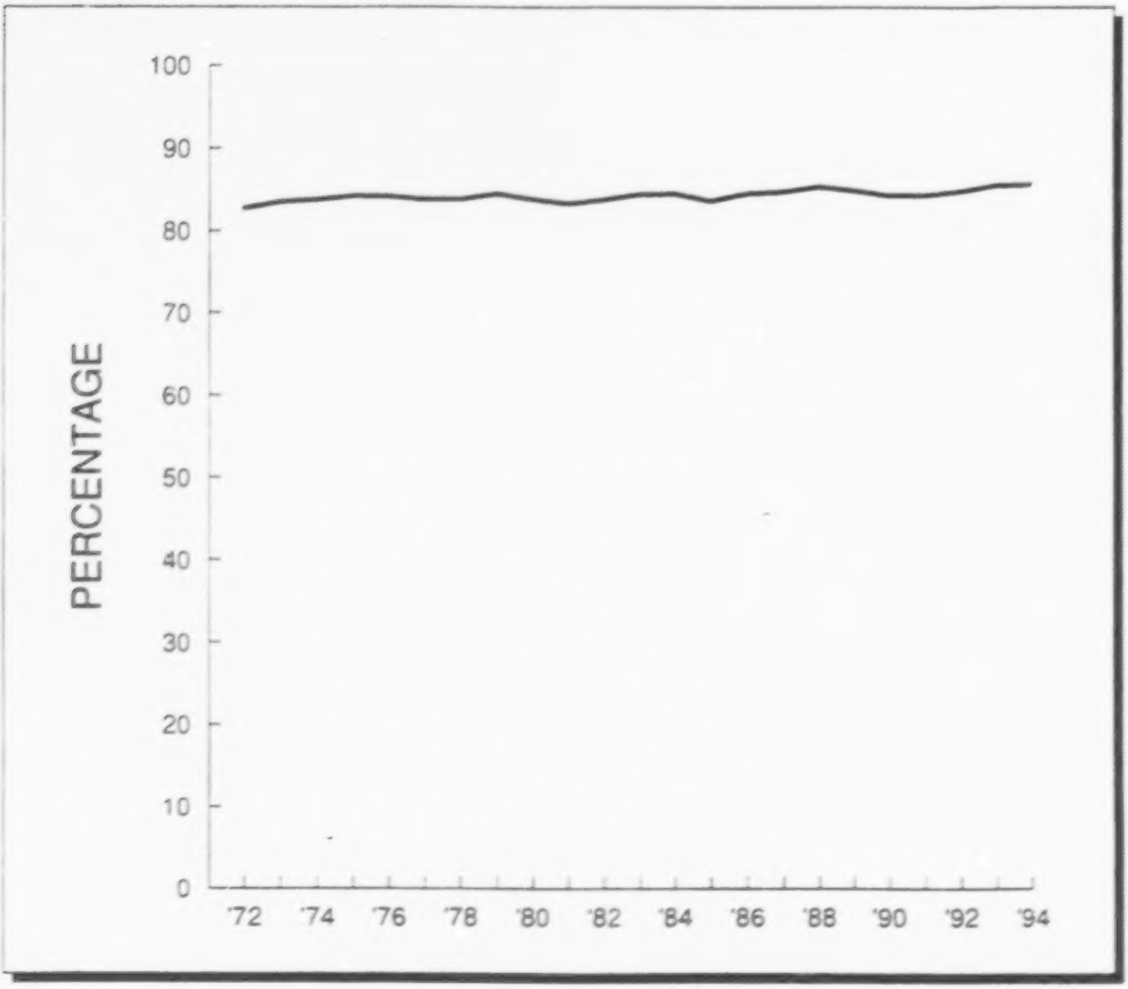
[49] Elliott, D., & Voss, H.L. (1974). *Delinquency and dropout*. Lexington, MA: D.C. Heath-Lexington Books.

[50] Fishburne, P.M., Abelson, H.I., & Cisin, I. (1980). *National survey on drug abuse: Main findings, 1979* (NIDA (ADM) 80-976). Washington, DC: U.S. Government Printing Office; Miller, J.D., et al., (1983). *National survey on drug abuse: Main findings, 1982* (NIDA (ADM) 83-1263). Washington, DC: U.S. Government Printing Office. See also Substance Abuse and Mental Health Services Administration. (1995). *National Household Survey on Drug Abuse: Main Findings 1992*. (DHHS Publication No. (SMA) 94-3012). Rockville, MD: Substance Abuse and Mental Health Services Administration.

FIGURE A-1

High School Completion by Persons 20-24 Years Old, 1972-1994

U.S. Population



Source: U.S. Bureau of the Census, Current Populations Survey, published and unpublished data; and 1980 Census.

Using the first assumption—that dropouts are just like absentees—we found that no prevalence rate was changed by more than 5% over the estimate based on 1983 seniors only, even with the simultaneous correction for both absentees and dropouts. (The method for calculating prevalence rates for the absentees is the one described in the previous section.) The largest correction in 1983 involved marijuana, with lifetime prevalence rising from just under 60% to 64%. Even under the most extreme assumption—which results in exceptionally high prevalence rates for dropouts on all drugs, for example 90% lifetime prevalence for marijuana—the overall correction in any of the prevalence figures for any drug remained less than 7.5%. Again, marijuana showed the biggest correction (7.5% in annual prevalence, raising it from 46% uncorrected to 54% with corrections for both absentees and dropouts). As we would have expected, the biggest *proportional* change occured for heroin, since it represents the most deviant end of the drug-using spectrum and thus usually would be most associated with truancy and dropping out.

Extrapolating from the household surveys. The second method of estimating drug use among dropouts was by comparing the household survey data on dropouts with the data from those remaining in school. We originally conducted secondary analyses of the archived data from the 1977 and 1979 National Household Surveys (NHSDA). (Analyses using more current NHSDA data are shown in the next section.) Analyses were restricted to the age range 17 to 19 years old, since about 95% of the Monitoring the Future seniors fall in this range. Of course, the number of cases is small. In the 1977 survey there were only 46 dropouts and 175 enrolled seniors in this age group. In the 1979 survey 92 dropouts and 266 seniors were included.

For marijuana, the estimated differences from the household survey data came out at a level which was at or below the least extreme assumption made in the previous method (where dropouts are assumed to have the same drug use levels as absentees). While this may have been comforting to the authors of the present report, we must admit that we believe these household samples underrepresented the more drug-prone dropouts to some degree. Thus we concluded that estimates closer to those made under the second assumption in the previous method may be closer to reality—that is, that dropouts are likely to deviate from participating seniors by one and one-half times the amount that absentees deviate from them.

We should note that there are a number of reasons for dropping out, many of which bear no relationship to drug use, including economic hardship in the family and certain learning disabilities and health problems. At the national level, the extreme groups such as those in jail or without a permanent place of residence are undoubtedly very small as a proportion of the total age groups and probably even as a proportion of all dropouts. Thus, regardless of their prevalence rates, they would be unable to move the prevalence estimates by a very large proportion except in the case of the most rare events–in particular, heroin use. We do believe that in the case of heroin use–particularly regular use–we are very likely unable to get a very accurate estimate even with the corrections used in this report. The same may be true for crack cocaine and PCP. For the remaining drugs, we conclude that our estimates based on participating seniors, though somewhat low, are not bad approximations for the age group as a whole.

Effects of omitting dropouts in trend estimates. Whether the omission of dropouts affects the estimates of trends in prevalence rates is a separate question, however, from the degree to which it affects absolute estimates at a given point in time. The relevant issues parallel those discussed earlier regarding the possible effects on trends of omitting the absentees. Most important is the question of whether the rate of dropping out has been changing in the country, since a substantial change would mean that seniors studied in different years would represent noncomparable segments of the whole class/age cohort. Fortunately for the purposes of this study, at least, the official government data provided in Figure A-1 indicate a very stable rate of dropping out since 1972.

Given that there appears to be no sound evidence of an appreciable change in the dropout rate, the only reason that trend data from seniors would deviate from trends for the entire class cohort (including dropouts) would be if the constant proportion who have been dropping out showed trends contrary to those observed among seniors; and even then, because of their small numbers, they would have to show dramatically different trends to be able to change the trend story very much for the age group as a whole. There has been no hypothesis offered for such a differential shift among dropouts which these authors, at least, find very convincing.

One hypothesis occasionally heard was that more youngsters were being expelled from school, or voluntarily leaving school, because of their drug use; and that this explained the downturn in the use of many drugs being reported by the study in the 1980s. However, it is hard to reconcile this hypothesis with the virtually flat (or, if anything, slightly declining) dropout rates over the period displayed in Figure A-1, unless one posits a perfectly offsetting tendency for more completion among those who are less drug prone—hardly a very parsimonious explanation. Further, the reported prevalence of some drugs remained remarkably stable throughout those years of the study (e.g., alcohol and opiates other than heroin) and the prevalence of some rose (cocaine until 1987, and amphetamines until 1981). These facts are not very consistent with the hypothesis that there had been an increased rate of departure by the most drug prone. Certainly more youngsters leaving school in the 1980s have drug problems than was true in the 1960s. (So do more of those who stay in.) However, they still seem likely to be very much the same segment of the population, given the degree of association that exists between drug use and deviance and problem behaviors of various sorts.

MORE RECENT UPDATE ON CORRECTIONS FOR DROPOUTS

More recently, we have looked at additional data regarding the effects of exclusion of dropouts. One additional source of information is a special report from the 1988 National Household Survey on Drug Abuse.[51] This report compared selected drug use rates for 16-17 year old respondents who were classified as currently enrolled in school or as having dropped out of school. The authors of that report concluded that: "The percentage of youth aged 16 and 17 who reported use of any illicit drug, marijuana, cocaine, and alcohol did not differ significantly among dropouts and those currently enrolled in school." (page 22) Differences in illicit drug use between high school graduates and dropouts were also slight among 21- to 25-year olds.

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[51] National Institute on Drug Abuse. (1991). "Drug use among youth: Findings from the 1988 National Household Survey on Drug Abuse." (DHHS Publication No. (ADM) 91-1765). Rockville MD: National Institute on Drug Abuse.

The authors noted that their findings appeared somewhat contrary to popular conceptions, as well as to some other research. Moreover, they reported that preliminary data for 20- to 34-year olds from the 1990 NHSDA showed higher rates of cocaine and marijuana use among dropouts. The authors conjectured that perhaps differences between dropouts and graduates emerge after age 25, when more young adults have finished college. They also noted that other variables, such as race, ethnicity, and socioeconomic status may confound the dropout versus graduate conparison. An additional problem was that, prior to the 1991 survey, the NHSDA did not include individuals who did not live in households; perhaps the more deviant dropouts were overrepresented in the excluded groups.

More recently, we have examined some data from the 1991 National Household Surveys on Drug Abuse. Specifically, we obtained estimated prevalence rates for two key illicit drugs, marijuana and cocaine, among dropouts ages 16-18. Table A-1 indicates the lifetime and monthly prevalences for Monitoring the Future seniors, and for NHSDA seniors and NHSDA dropouts.

Table A-1. Comparison of 1991 Monitoring the Future Seniors, NHSDA Seniors, and NHSDA Dropouts

	MTF Seniors	NHSDA Seniors	NHSDA Dropouts 16-18
Marijuana			
Life	36.7	31.9	60.7
30Days	13.8	11.6	21.0
Cocaine			
Life	7.8	8.6	20.0
30Days	1.4	1.3	2.3

As can be seen, the 1991 NHSDA dropouts aged 16-18 were distinctly higher in cocaine and marijuana use than the NHSDA seniors, and the 1991 MTF seniors. (This result is somewhat contradictory to the results from the earlier report based on 1988 data. The relatively small numbers of dropouts make definitive statements difficult.) As discussed above, however, the relatively small proportion of the population who are dropouts reduces the impact that their higher prevalences have on overall population estimates.

Table A-2 compares the total population prevalence estimates derived using two different methods. The first method shows the estimates that result when we use the method we previously described, which provided the data shown in Figure A-2, where the prevalence rate among dropouts is assumed to be higher than seniors present by 1.5 times the difference between seniors present and seniors absent. Column (3) in Table A-2 is calculated by reweighting the data for absenteeism, and calculating the estimated prevalence among absentees. The prevalence among dropouts is estimated by assuming that they differ from seniors present by a factor 1.5 times greater than the difference between seniors present and seniors absent (column (4)). The data in columns (2) and (3) are combined in appropriate proportion to derive estimated prevalence among seniors present plus absentees (column (5)). The data in columns (2), (3), and (4) are combined in appropriate proportion to derive estimated prevalence among seniors present, seniors absent, plus dropouts; these estimates are shown in column (6). (For 1991, the percentage of dropouts is estimated at 15% and the percentage of seniors absent is 15.9% [based on data collected in participating schools]; these figures result in the following proportions for the total age cohort: seniors present, .715; seniors absent, .135, and dropouts, .150.)

The second method takes the estimated prevalence from MTF, adjusted for absentee bias, and further adjusts by assuming that the difference between NHSDA seniors versus NHSDA dropouts is the best estimate of the difference beween dropouts and stayins (column (11)).

The data in columns (7) and (8) are prevalence rates reported in the 1991 NHSDA seniors and for dropouts age 16-18, and column (9) shows the algebraic difference. This absolute "bias" is treated as an estimate of the difference between seniors (present plus absent) versus dropouts. This "bias" is then applied to the estimated prevalence based on MTF data of seniors present plus absent (column (5)) to derive an estimate of the prevalence among dropouts (column (10)). These estimates are higher than the NHSDA estimates because MTF estimates for nondropouts are higher than the NHSDA estimates. Finally, the data in columns (5) and (10) are combined in appropriate proportion to derive estimates presented in column (11) for the entire cohort.

Note that the estimated prevalences among dropouts based on NHSDA data are not very different from the estimates using the "1.5" factor. (Compare columns (10) and (4)). Consequently, the data in column (11) show estimates that turn out to be highly similar to those in column (6).

The similarity suggests that the estimates of corrections for dropouts that we have been providing, based on earlier data, are probably still reasonable. In fact, based on all of the NHSDA data, they may actually be conservatively high.

Finally, an additional piece of information relative to the comparison of drug use rates among students who stay in school and dropouts comes from Fagan and Pabon (1990)[52], who report some comparison data between high school students and dropouts from six inner-city neighborhoods. About 1,000 male students and 1,000 female students were compared with 255 male dropouts and 143 female dropouts. Although dropouts were generally more delinquent, and more involved with substance use, there was also a great deal of variability by specific class of substances. As would be generally expected, marijuana use was lower among students, compared to dropouts. Psychedelic use, on the other hand, was *higher* among students than among dropouts. Use of tranquilizers and barbiturates was also higher among students. Amphetamine use was lower among male students, but higher among female students, compared to same-sex dropouts. Cocaine use was similar, lower among male students, but higher among female students, compared to dropouts. Students of both genders reported more heroin use than did dropouts. Inhalant use did not differ significantly between students and dropouts.

Overall, the data indicate a distinct variation, depending on the class of drug. Although heroin use was surprisingly higher among students, it should be noted that this study was in a single city, and may not be representative of the broader array of students and dropouts. The study does show, however, that the usual assumption that dropouts invariably use drugs more than students is not always true.

SUMMARY AND CONCLUSIONS

In sum, while we believe there is some underestimation of the prevalence of drug use in the cohort at large as a result of the dropouts being omitted from the universe of the study, we think the degree of underestimation is rather limited for all drugs (with the possible exceptions of heroin, crack, and PCP) and, more importantly, that trend estimates have been rather little affected. Short of having good trend data gathered directly from dropouts we cannot close the case definitively. Nevertheless, we think the available evidence argues strongly against alternative hypotheses—a conclusion which was also reached by the members of the NIDA technical review on this subject held in 1982.[53]

> . . . the analyses provided in this report show that failure to include these two groups (absentees and dropouts) does not substantially affect the estimates of the incidence and prevalence of drug use.

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[52] Fagan, J. & Pabon, E. (1990). Contributions of delinquency and substance use to school dropout among inner-city youths. *Youth & Society, 21*, 306-354.

[53] Clayton, R.R. & Voss, H.L. (1982). *Technical review on drug abuse and dropouts.* Rockville, MD: National Institute on Drug Abuse.

Table A-2. Estimated Prevalence Rates for Marijuana and Cocaine, 1991, Based on Monitoring the Future and National Household Survey on Drug Abuse

	Monitoring the Future					NHSDA			Combined	
	Seniors Present	Seniors Absent	Dropouts	Seniors Absent & Present	Total	Seniors	Dropouts (Age 16-18)	Difference	Dropouts	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Cocaine- 30 Day	1.4	2.7	3.3	1.6	1.9	1.3	2.3	1.0	2.6	1.8
Cocaine-Life	7.8	15.3	19.1	9.0	10.3	8.6	20.0	11.4	20.4	10.7
Marijuana-30 Day	13.8	22.0	26.1	15.1	16.7	11.6	21.0	9.4	24.5	16.5
Marijuana-Life	36.7	49.9	56.5	38.8	41.4	31.9	60.7	28.8	67.6	43.1

NOTES: The entries in columns are as follows.

(2) estimates based on all MTF seniors who completed questionnaires.
(3) estimated prevalences among seniors who were absent (using data from seniors who were present, as explained in text).
(4) estimated prevalences among dropouts, based on assumptions described in text.
(5) estimated prevalences among seniors present plus seniors who were absent.
(6) estimated prevalences among seniors present, seniors who were absent, and same-age dropouts.
(7) estimates based on all NHSDA respondents who were high school seniors.
(8) estimates based on all NHSDA respondents, 16-18 years old, who were not attending school and had not graduated.
(9) difference between columns (7) and (8), that is, the difference between all NHSDA seniors and dropouts; this is considered a valid estimate of the population difference between seniors and dropouts.
(10) sum of columns (5) and (9), combining MTF estimated use among all seniors (present and absent) plus the estimated population difference between all seniors and dropouts, resulting in an estimated prevalence among dropouts.
(11) weighted combined estimate of prevalence, using MTF estimates for all seniors (column (5)), and estimate of prevalence among dropouts (column (10)).

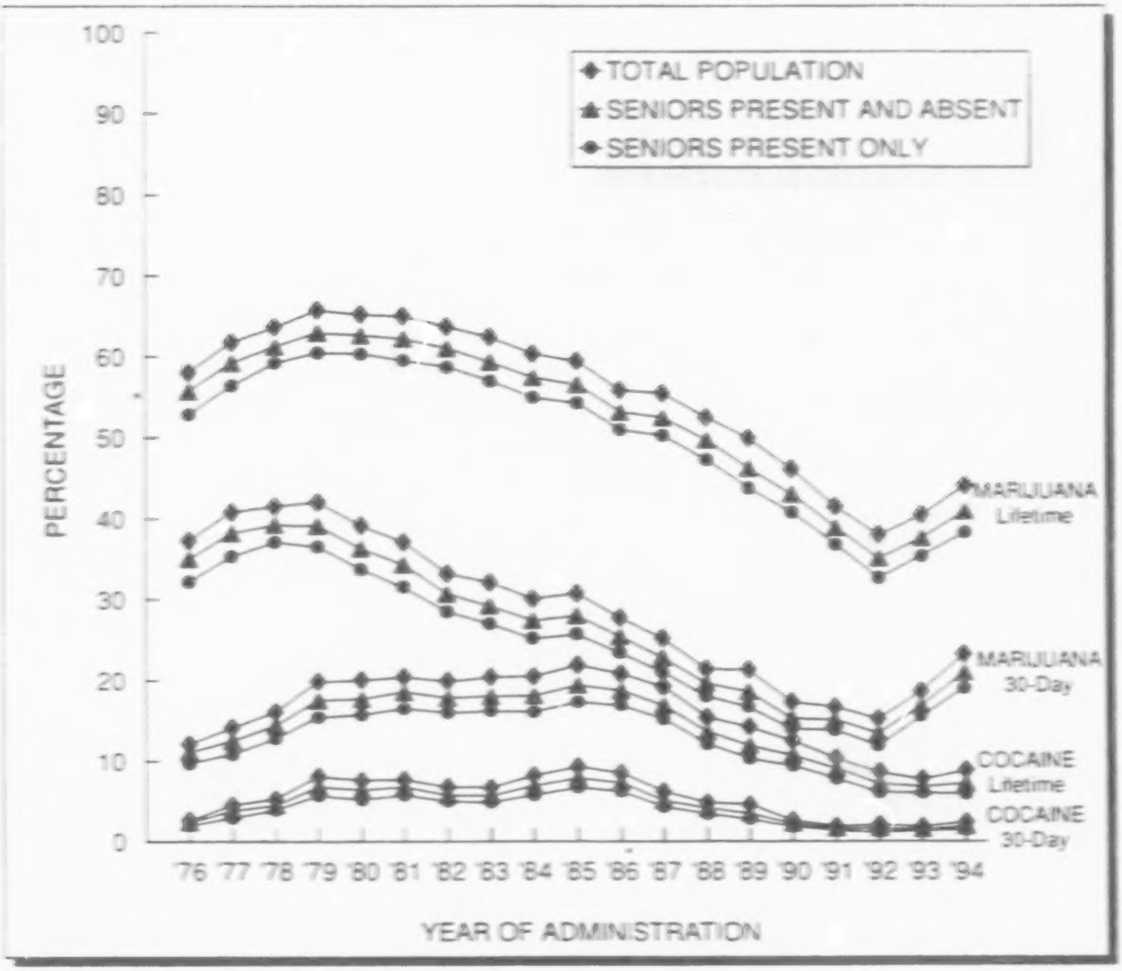
EXAMPLES OF REVISED ESTIMATES FOR TWO DRUGS

Figure A-2 provides the prevalence and trend estimates of marijuana and cocaine, for both the lifetime and thirty-day prevalence periods, showing (a) the original estimates based on *participating seniors* only; (b) the empirically derived, revised estimates based on *all seniors*, including the absentees; and (c) estimates for the *entire class/age cohort*. The last estimate was developed using the assumption judged to be most reasonable above–namely that the dropouts differ from participating seniors by one and one-half times the amount that the absentees do. Estimates were calculated separately for each year, thus taking into account any differences from year to year in the participation or absentee rates. The dropout rate was taken as a constant 15% of the age group across all years, based on Census estimates.

As Figure A-2 illustrates, any difference in the slopes of the trend lines between the original and revised estimates is extremely, almost infinitesimally, small. The prevalence estimates are higher, of course, but not dramatically so, and certainly not enough to have any serious policy implications. As stated above, the corrections for eighth and tenth grade samples should be considerably less, and there is certainly no reason to think that absentee or dropout rates at those levels have changed since 1991 in any way which could have changed their trend stories. Therefore, we have confidence that the trend stories which have shown up for the in-school populations represented in this study would be very similar to the trend stories which would pertain if the entire age cohorts had been the universes from which we sampled.

FIGURE A-2

Estimates of Prevalence and Trends for the Entire Age/Class Cohort, Adjusting for Absentees and Dropouts for Twelfth Graders



Appendix B

DEFINITION OF BACKGROUND AND DEMOGRAPHIC SUBGROUPS

Throughout this volume data are presented for the total sample of eighth, tenth and twelfth graders. Data are also presented for many subgroups of students. The following are brief descriptions of the background and demographic subgroups used in this volume.

Total:	The total sample of respondents in a given year of the study.
Sex:	***Male and female.*** Respondents with missing data on the question asking the respondent's sex are omitted from both groupings.
College Plans:	Respondents not answering the college plans question are omitted from both groupings. (Among those who do not expect to complete a four-year college program a number still expect to get some post-secondary education.) College plans groupings are defined as follows: ***None or under 4 years.*** Respondents who indicate they "definitely won't" or "probably won't" graduate from a four-year college program. ***Complete 4 years.*** Respondents who indicate they "definitely will" or "probably will" graduate from a four-year college program.
Region:	Region of the country in which the respondent lives. There are four mutually exclusive regions of the country. The regional classifications are based on Census categories which are defined as follows: ***Northeast.*** Census classifications of New England and Middle Atlantic states; includes Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. ***North Central.*** Census classifications of East North Central and West North Central states; includes Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

South. Census classifications of South Atlantic, East South Central, and West South Central States; includes Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

West. Census classifications of Mountain and Pacific states: includes Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

Population Density:

Population density of the area in which the schools are located. There are three mutually exclusive groups which are defined below. (1975-1985 samples are based on the 1970 Census; in 1986 one-half of the sample is based on the 1970 Census, the other half of the sample is based on the 1980 Census; after 1986 the samples are based on the 1980 Census. The three groups are defined in terms of Metropolitan Statistical Area (MSA) designations through 1985, when we changed to the new Census Bureau classifications of Metropolitan Statistical Areas (MSAs), as is described below:

Large MSAs. In the 1975-1985 samples these are the twelve largest Metropolitan Statistical Areas (MSA) as of the 1970 Census: New York, Los Angeles, Chicago, Philadelphia, Detroit, San Francisco, Washington, Boston, Pittsburgh, St. Louis, Baltimore and Cleveland. In samples collected after 1986 the "large MSA" group consisted of the 16 largest MSAs as of the 1980 Census. These 16 MSAs include all of the MSAs mentioned above (except Cleveland) and the MSAs of Dallas-Fort Worth, Houston, Nassau-Suffolk, Minneapolis-St. Paul and Atlanta.

Other MSAs. Includes all other Metropolitan Statistical Areas except those listed above. Except in the New England States, an MSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In the New England States MSAs consist of towns and cities instead of counties. Each MSA must include at least one central city, and the complete title of an MSA identifies the central city or cities. For the complete description of the criteria used in defining MSAs, see the Office of Manaement and the Budget publication, *Metropolitan Statistical Areas, 1990* (NTIS-PB90-214420), Washington, D.C. The population living in MSAs is designated as the metropolitan population.

Non-MSAs. Includes all areas not designated as MSAs. The population living outside MSAs constitutes the nonmetropolitan population.

Parental Education:

This is an average of mother's education and father's education reported on the following scale: (1) completed grade school or less, (2) some high school, (3) completed high school, (4) some college, (5) completed college, (6) graduate or professional school after college. Missing data was allowed on one of the two variables.

Race/Ethnicity:

White. Includes those respondents who describe themselves as White or Caucasian.

Black. Includes those respondents who in 1975-1990 describe themselves as Black or Afro-American, or who after 1990 describe themselves as Black or African-American.

Hispanic. Includes those respondents who in 1975-1990 describe themselves as Mexican American or Chicano, or Puerto Rican or other Latin American. After 1990 this group includes those respondents who describe themselves as Mexican American or Chicano, or Cuban American, or Puerto Rican American, or other Latin American.

Appendix C

SUPPLEMENTAL TABLES FOR SECONDARY SCHOOL STUDENTS: TRENDS BY SUBGROUP

Trend data for the major population subgroups discussed in this volume (defined by sex, college plans, region, community size, level of parental education, and racial/ethnic distinctions) are presented below for the major classes of licit and illicit drugs. Because of the sheer quantity of information such trend tables generate, we have selected the prevalence periods which seem most useful for understanding differences by subgroup. For most drugs, only the trends in annual prevalence are given, but other prevalence rates are provided for selected drugs, including marijuana, alcohol, cigarettes, and smokeless tobacco.

The subgroups are the standard ones used throughout this volume and are operationally defined in Appendix B. The reader should note that two-year moving averages are given for the three racial/ethnic groups described, in order to damp down random fluctuations in the trends for the two major minority groups. A footnote in each table describes the procedure.

For nearly all drugs there is one table presenting the subgroup trends for eighth and tenth grade students and a second table for twelfth grade students. However, for two of the drugs–barbiturates and narcotics other than heroin–the eighth and tenth grade data have been omitted, as they are throughout the volume, because we are less certain about the validity of the answers provided by the younger students. Specifically, we believe that they often fail to omit substances which should be omitted (i.e., non-prescription substances).

Sample sizes should be taken into account when interpreting the importance of any changes observed, of course. They are provided in the last two pages of the appendix.

TABLE C-1
Marijuana: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	6.2	7.2	9.2	13.0	16.5	15.2	19.2	25.2
Sex:								
Male	7.3	7.4	10.5	15.1	17.7	16.3	21.2	28.2
Female	5.1	6.9	8.0	10.9	15.1	13.9	16.9	21.9
College Plans:								
None or under 4 yrs.	15.8	17.5	22.4	27.7	26.9	25.1	31.5	37.3
Complete 4 yrs.	4.6	5.5	7.3	11.0	14.2	13.0	16.5	22.4
Region:								
Northeast	5.0	5.8	6.2	12.1	17.1	14.9	22.4	25.6
North Central	5.9	6.0	8.0	12.0	15.8	14.8	17.4	23.4
South	6.1	7.3	9.0	11.4	14.5	12.5	16.4	23.8
West	7.8	10.3	14.8	18.1	19.4	20.4	24.0	30.0
Population Density:								
Large MSA	5.2	6.7	8.0	11.7	16.5	15.1	19.0	25.7
Other MSA	7.2	8.3	10.9	15.9	17.3	15.9	19.8	28.1
Non-MSA	5.3	5.7	7.2	8.0	14.9	13.9	18.2	18.5
Parental Education:								
1.0-2.0 (Low)	13.2	12.7	13.6	18.7	20.3	18.9	22.4	25.8
2.5-3.0	7.0	7.7	10.7	14.5	17.8	16.0	19.7	26.3
3.5-4.0	6.2	7.0	9.7	13.2	16.2	15.1	19.3	25.6
4.5-5.0	3.7	5.4	7.4	10.9	14.9	14.1	17.6	23.8
5.5-6.0 (High)	4.6	5.2	6.4	11.0	15.9	13.7	18.5	23.3
Race (2-year average):*								
White	—	6.4	7.8	10.0	—	17.0	18.0	22.6
Black	—	4.1	5.7	8.9	—	7.6	8.7	15.3
Hispanic	—	11.9	13.9	18.1	—	18.9	21.3	25.1

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined into two-year moving averages to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-2
Marijuana: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percent who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	23.9	21.9	26.0	30.7
Sex:																				
Male	45.8	50.6	53.2	55.9	55.8	53.4	49.2	47.2	45.7	43.2	43.1	41.2	38.6	35.8	32.8	29.4	27.2	24.4	29.0	35.1
Female	34.9	37.8	42.0	44.3	45.7	44.1	42.5	40.8	38.4	36.0	37.8	36.0	33.8	30.3	26.3	24.2	20.1	18.9	22.4	26.4
College Plans:																				
None or under 4 yrs.	—	46.8	50.7	51.6	53.1	51.7	49.7	48.2	46.0	44.2	44.0	42.7	40.6	36.2	34.4	31.1	27.6	27.5	29.1	34.4
Complete 4 yrs.	—	40.7	43.4	47.1	47.3	45.9	42.6	40.6	38.3	35.9	37.5	36.1	34.0	31.3	27.3	24.7	22.0	19.4	24.4	29.1
Region:																				
Northeast	47.4	52.7	53.5	59.2	60.6	55.5	53.2	50.9	49.3	49.6	48.2	44.6	41.2	36.7	31.3	32.2	28.2	23.9	31.2	36.0
North Central	40.1	44.0	48.1	51.6	52.2	48.9	46.8	45.6	42.0	36.4	40.8	40.2	37.4	34.3	33.0	28.7	26.1	22.7	26.0	30.5
South	32.4	37.9	42.5	42.7	41.2	42.0	38.0	36.7	36.1	35.6	31.0	31.7	30.2	28.7	25.0	21.4	18.1	18.1	23.2	28.7
West	44.1	45.8	46.8	49.1	51.9	51.7	49.6	45.5	44.8	43.2	46.2	41.2	39.6	35.6	32.3	28.3	26.8	26.1	26.4	30.0
Population Density:																				
Large MSA	50.4	51.3	53.2	57.2	58.7	56.3	51.4	50.4	47.0	44.2	44.4	42.6	39.3	34.3	27.8	27.7	24.3	22.6	29.1	33.5
Other MSA	40.3	44.2	48.9	50.8	51.9	49.8	46.4	44.8	44.0	41.0	40.7	39.4	36.9	34.7	30.3	28.3	27.5	22.1	26.2	32.0
Non-MSA	32.9	39.8	41.2	43.3	43.3	41.9	41.6	38.5	36.5	35.3	37.3	34.7	32.2	29.0	30.0	23.5	17.5	21.0	23.1	25.8
Parental Education:																				
1.0-2.0 (Low)	35.2	38.9	41.0	42.5	46.0	43.7	41.8	38.9	39.7	35.7	37.1	33.4	30.7	30.7	23.3	21.0	22.4	21.2	23.0	26.3
2.5-3.0	39.2	46.1	48.2	50.3	50.0	49.0	45.3	44.5	42.2	40.1	40.6	38.8	36.3	31.1	29.6	26.9	22.5	21.1	24.1	29.7
3.5-4.0	38.5	44.9	49.5	51.4	52.7	49.8	47.0	46.5	42.2	41.4	41.0	40.1	36.8	33.4	31.4	27.6	24.0	22.7	26.6	31.5
4.5-5.0	40.6	46.8	49.3	53.2	53.7	50.5	47.6	45.9	43.5	39.6	43.2	39.9	37.5	35.1	29.7	28.5	23.8	20.8	27.2	32.0
5.5-6.0 (High)	38.7	47.5	48.6	55.2	51.2	52.0	48.5	45.7	43.7	39.9	37.9	38.9	38.6	35.9	30.7	29.4	28.2	22.6	28.0	32.3
Race (2-year average)*																				
White	—	—	46.8	50.1	51.8	51.2	49.1	47.1	44.6	42.0	41.6	41.4	39.7	37.6	34.5	31.6	28.2	24.9	25.9	30.2
Black	—	—	37.9	39.6	38.4	37.5	36.1	35.5	37.4	36.4	33.4	30.6	25.7	21.2	17.8	13.7	11.4	11.5	14.2	20.7
Hispanic	—	—	45.8	43.4	42.1	44.1	41.2	38.8	38.3	38.8	37.8	36.7	33.3	29.6	25.0	21.6	23.6	24.7	23.5	25.7

NOTES: "—" indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

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TABLE C-3

Inhalants: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	9.0	9.5	11.0	11.7	7.1	7.5	8.4	9.1
Sex:								
Male	9.0	9.2	10.4	11.2	7.4	7.6	9.1	9.7
Female	9.0	9.8	11.9	12.2	6.6	7.5	7.7	8.6
College Plans:								
None or under 4 yrs.	15.0	15.6	17.7	18.3	12.0	12.4	14.0	15.1
Complete 4 yrs.	8.1	8.8	10.2	10.9	5.9	6.4	7.3	7.8
Region:								
Northeast	8.0	8.6	11.3	12.0	7.2	7.8	10.6	9.8
North Central	9.8	10.5	9.9	10.3	7.5	8.0	8.3	8.4
South	8.9	9.1	10.0	11.3	7.2	6.6	7.3	9.0
West	8.8	9.8	14.2	14.0	6.2	8.0	8.4	9.9
Population Density:								
Large MSA	9.9	9.1	10.8	11.0	7.7	7.8	8.5	8.0
Other MSA	8.5	10.3	12.3	13.1	7.1	7.4	8.4	9.6
Non-MSA	9.1	8.6	8.5	9.3	6.5	7.5	8.6	9.1
Parental Education:								
1.0-2.0 (Low)	12.0	11.4	11.5	12.4	7.0	8.2	10.2	8.7
2.5-3.0	9.5	9.9	10.9	12.1	8.0	7.9	9.1	9.5
3.5-4.0	8.9	10.0	11.5	12.3	7.5	8.3	8.3	9.6
4.5-5.0	8.0	8.4	10.6	11.0	6.4	6.5	7.2	8.7
5.5-6.0 (High)	8.4	10.3	12.6	12.2	6.6	6.7	8.2	8.2
Race (2-year average):*								
White	—	10.1	11.3	12.4	—	8.3	8.8	9.6
Black	—	4.4	4.6	5.3	—	3.6	3.7	3.3
Hispanic	—	10.4	11.5	12.5	—	6.4	8.3	9.0

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-4
Inhalants:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percent who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	—	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9	6.6	6.2	7.0	7.7
Adjusted[b]	—	—	—	—	8.9	7.9	6.1	6.6	6.2	7.2	7.5	8.9	8.1	7.1	6.9	7.5	6.9	6.4	7.4	8.2
Sex:																				
Male	—	3.8	5.1	5.6	6.7	5.9	5.1	5.8	5.8	6.5	6.9	7.8	8.3	8.2	7.8	8.8	8.2	8.0	9.2	9.6
Female	—	2.0	2.4	2.8	4.2	3.5	3.2	3.1	2.8	3.8	4.5	4.7	5.6	4.9	4.0	4.9	5.0	4.5	4.8	6.0
College Plans:																				
None or under 4 yrs.	—	3.6	4.7	5.0	6.3	5.0	4.3	4.9	4.7	5.8	5.8	7.7	8.0	8.1	7.1	7.8	7.7	7.7	8.0	9.0
Complete 4 yrs.	—	2.2	2.9	3.4	4.5	4.3	4.0	4.1	3.9	4.7	5.7	5.2	6.4	6.0	5.4	6.4	6.3	5.7	6.7	7.4
Region:																				
Northeast	—	3.2	4.1	4.4	6.4	6.0	5.2	6.2	5.0	6.1	8.0	5.6	6.7	6.0	6.3	7.4	6.7	6.0	8.9	10.3
North Central	—	2.6	4.2	4.8	5.9	4.6	3.8	3.6	4.5	5.0	5.8	6.7	8.6	7.2	6.7	8.0	8.6	7.4	6.3	9.5
South	—	3.8	3.3	3.6	4.3	3.4	3.2	3.8	3.8	4.6	4.2	5.7	6.1	6.8	5.5	6.4	5.0	4.8	6.5	6.2
West	—	1.7	3.0	3.6	4.9	4.9	4.7	4.4	4.3	5.3	5.4	6.6	6.2	5.6	4.8	5.7	6.8	7.5	7.0	5.7
Population Density:																				
Large MSA	—	2.9	3.4	3.4	5.1	5.7	4.7	5.5	4.8	5.3	5.9	5.2	6.0	6.5	5.1	6.7	5.2	6.0	7.4	8.2
Other MSA	—	2.6	3.6	3.7	4.8	4.2	4.0	3.9	4.4	5.0	5.9	6.3	6.9	6.0	5.8	6.8	7.8	6.6	7.3	7.5
Non-MSA	—	3.4	4.2	5.3	6.2	4.4	3.7	4.4	3.9	5.2	5.4	6.6	7.8	7.5	6.8	7.4	5.8	5.6	6.0	7.6
Parental Education:																				
1.0-2.0 (Low)	—	3.7	3.9	4.5	5.2	3.6	3.6	3.2	3.1	4.5	4.2	4.9	4.6	5.3	5.9	5.0	6.1	4.2	4.3	5.3
2.5-3.0	—	3.1	4.1	4.0	5.0	4.8	4.0	4.8	4.0	5.2	5.6	6.1	6.8	6.3	5.5	6.9	6.6	6.7	6.0	7.8
3.5-4.0	—	3.1	3.4	4.1	5.1	4.7	4.0	4.6	4.9	5.6	5.5	6.2	7.1	5.8	6.1	7.2	6.1	6.3	7.7	7.1
4.5-5.0	—	2.7	3.0	3.9	5.8	4.3	4.4	4.4	5.2	5.0	7.0	6.9	7.2	7.0	5.7	7.4	7.4	6.3	7.6	8.9
5.5-6.0 (High)	—	3.7	4.2	5.0	7.2	5.8	4.9	6.0	4.7	5.6	6.8	6.4	8.7	9.1	6.8	7.6	7.1	6.7	9.4	9.7
Race (2-year average):[c]																				
White	—	—	3.6	4.3	5.1	5.3	4.7	4.7	4.8	5.1	5.9	6.5	7.3	7.6	7.0	7.2	7.6	7.2	7.6	8.6
Black	—	—	1.5	1.3	2.1	2.2	2.1	1.9	1.8	2.2	2.0	2.1	3.0	3.1	2.2	2.1	2.7	2.5	2.2	2.4
Hispanic	—	—	2.7	3.0	2.9	2.9	3.5	4.1	3.4	4.6	6.5	5.5	4.6	4.1	4.7	4.8	5.4	6.0	5.7	5.5

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on four questionnaire forms in 1976-1988; N is four-fifths of N indicated. Data based on five questionnaire forms in 1989-1994; N is five-sixths of N indicated.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Data are unadjusted for underreporting of amyl and butyl nitrites except as noted.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-5
Hallucinogens: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	1.9	2.5	2.6	2.7	4.0	4.3	4.7	5.8
Sex:								
Male	2.2	2.6	2.8	3.0	4.4	4.7	5.7	6.6
Female	1.6	2.3	2.3	2.4	3.6	3.8	3.6	4.8
College Plans:								
None or under 4 yrs.	5.1	7.2	7.1	6.7	7.5	7.5	9.1	10.4
Complete 4 yrs.	1.4	1.8	1.9	2.2	3.3	3.6	3.7	4.8
Region:								
Northeast	1.5	1.6	1.9	2.9	4.0	2.7	4.7	5.8
North Central	1.6	2.4	1.7	2.2	3.4	4.3	4.6	5.7
South	1.9	2.7	2.8	2.4	3.6	3.9	3.6	5.1
West	2.8	3.2	4.2	3.9	5.2	6.5	6.7	7.1
Population Density:								
Large MSA	2.1	2.2	2.2	2.8	4.1	4.6	4.9	6.0
Other MSA	2.0	3.0	3.1	3.3	4.8	4.4	4.9	6.4
Non-MSA	1.5	2.0	1.8	1.6	2.5	3.7	4.1	4.4
Parental Education:								
1.0-2.0 (Low)	3.9	3.7	3.5	3.1	3.7	4.9	6.0	6.1
2.5-3.0	2.2	2.3	2.7	2.8	4.3	4.2	4.5	5.5
3.5-4.0	1.6	2.5	2.8	2.8	3.7	4.6	4.8	5.9
4.5-5.0	1.6	2.0	2.3	2.8	4.1	3.8	4.5	5.5
5.5-6.0 (High)	1.4	2.4	2.0	2.5	4.6	4.2	4.6	6.2
Race (2-year average):[a]								
White	—	2.2	2.6	2.8	—	4.9	5.1	5.6
Black	—	0.7	0.7	0.6	—	0.2	0.6	1.1
Hispanic	—	3.8	4.1	4.0	—	3.6	4.5	5.7

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-6
Hallucinogens:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percent who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9	5.8	5.9	7.4	7.6
Adjusted[b]	—	—	—	—	11.8	10.4	10.1	9.0	8.3	7.3	7.6	7.6	6.7	5.8	6.2	6.0	6.1	6.2	7.8	7.8
Sex:																				
Male	13.7	11.6	10.8	11.6	11.8	11.7	10.9	9.6	8.6	7.9	8.1	7.2	7.5	7.2	7.4	7.7	7.5	7.1	8.9	9.2
Female	9.0	6.9	6.5	7.3	7.6	6.7	6.8	6.1	5.5	4.7	4.4	4.7	5.2	3.7	3.6	3.8	3.9	4.7	5.6	5.8
College Plans:																				
None or under 4 yrs	—	11.2	10.6	11.0	11.3	11.2	10.7	9.5	8.9	8.3	7.7	7.4	7.9	6.4	7.1	6.6	7.0	7.8	8.1	8.4
Complete 4 yrs	—	6.9	6.4	7.3	7.5	7.1	7.4	6.2	5.4	4.7	5.0	4.7	5.4	4.7	4.8	5.3	5.3	5.1	6.9	7.0
Region:																				
Northeast	13.2	10.9	10.6	13.0	12.9	12.2	12.9	11.4	8.7	11.3	9.9	7.9	7.5	5.8	5.6	6.6	7.0	7.1	9.0	9.0
North Central	13.0	10.3	9.7	10.7	11.1	11.3	10.3	9.1	8.9	6.0	6.8	6.6	6.9	5.3	6.6	5.7	6.5	5.9	6.8	8.1
South	8.5	7.4	6.8	6.3	5.7	5.4	4.1	4.6	5.2	3.9	3.2	3.3	4.8	5.2	4.9	5.0	3.7	4.7	5.9	6.7
West	10.2	9.3	8.2	9.6	11.0	9.2	10.4	7.8	6.3	7.0	6.3	7.2	7.4	6.0	5.5	6.9	7.3	7.3	9.2	7.1
Population Density:																				
Large MSA	13.9	11.1	9.9	11.9	12.3	11.6	12.0	10.9	9.2	8.8	8.3	7.6	7.9	6.5	5.4	5.7	5.1	6.2	7.3	8.1
Other MSA	12.1	9.8	9.1	9.3	10.5	9.8	9.0	7.6	7.6	6.3	6.1	5.9	6.3	6.0	5.9	6.5	7.7	6.0	8.1	8.5
Non-MSA	8.5	7.7	7.5	8.3	7.1	7.1	6.8	6.5	5.3	5.0	5.0	4.9	5.3	3.5	5.0	4.5	3.3	5.5	6.3	5.1
Parental Education:																				
1.0-2.0 (Low)	8.9	7.4	6.8	7.7	7.1	8.0	6.7	6.5	6.5	5.4	4.8	5.4	5.8	4.9	4.2	3.8	4.9	3.6	4.9	5.0
2.5-3.0	10.2	10.0	9.1	9.6	9.6	9.5	8.9	8.0	6.8	6.7	6.4	6.0	6.2	4.2	4.9	4.6	4.9	5.6	5.9	7.0
3.5-4.0	10.9	9.8	9.2	9.7	9.7	9.2	9.2	8.6	7.7	6.3	7.2	6.3	6.0	4.8	5.6	6.5	6.2	6.0	7.5	8.0
4.5-5.0	11.1	10.1	8.8	10.2	10.9	9.1	9.4	7.8	7.0	5.9	6.2	5.5	6.8	6.7	6.6	6.8	6.1	6.2	8.9	7.7
5.5-6.0 (High)	8.9	9.4	9.5	10.2	11.7	9.9	10.6	9.0	7.0	7.6	4.3	5.9	7.2	7.2	7.0	8.2	7.3	7.4	8.9	9.0
Race (2-year average):[c]																				
White	—	—	9.8	9.9	10.5	10.3	10.0	9.3	8.3	7.5	7.0	6.7	6.8	6.8	6.4	6.7	6.8	6.9	7.9	8.6
Black	—	—	2.4	2.3	2.0	1.9	1.9	1.8	2.2	1.7	1.2	1.6	1.5	1.0	0.9	0.8	0.6	0.7	0.8	1.2
Hispanic	—	—	7.9	7.2	7.0	7.1	7.0	7.7	6.6	5.2	5.7	5.7	5.0	4.0	3.2	3.3	4.4	4.6	5.3	5.8

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Data are unadjusted for underreporting of PCP except as noted.

[b] Adjusted for underreporting of PCP. See text for details.

[c] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-7
LSD: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	1.7	2.1	2.3	2.4	3.7	4.0	4.2	5.2
Sex:								
Male	2.0	2.1	2.5	2.6	3.9	4.3	5.1	5.9
Female	1.3	2.0	2.1	2.1	3.4	3.6	3.2	4.3
College Plans:								
None or under 4 yrs.	4.5	6.4	6.4	6.2	6.8	7.0	8.4	9.4
Complete 4 yrs.	1.2	1.5	1.6	1.8	3.0	3.4	3.3	4.2
Region:								
Northeast	1.3	1.4	1.8	2.6	3.6	2.6	3.8	5.1
North Central	1.4	1.8	1.4	1.7	3.2	4.1	4.4	5.2
South	1.8	2.4	2.4	2.1	3.3	3.7	3.2	4.6
West	2.2	2.9	3.7	3.3	4.8	5.9	6.1	6.3
Population Density:								
Large MSA	1.9	2.0	2.0	2.5	3.8	4.4	4.4	5.4
Other MSA	1.7	2.5	2.8	2.8	4.4	4.1	4.4	5.8
Non-MSA	1.3	1.6	1.4	1.3	2.3	3.5	3.7	3.7
Parental Education:								
1.0-2.0 (Low)	3.5	3.1	3.1	2.8	3.1	4.4	5.5	5.5
2.5-3.0	1.8	2.1	2.3	2.6	4.0	4.2	4.2	5.1
3.5-4.0	1.4	2.0	2.4	2.4	3.4	4.1	4.2	5.3
4.5-5.0	1.4	1.5	2.1	2.1	3.8	3.6	3.9	4.8
5.5-6.0 (High)	1.3	2.0	2.0	2.1	4.2	3.9	3.9	5.4
Race (2-year average):*								
White	—	1.9	2.3	2.5	—	4.6	4.6	5.0
Black	—	0.5	0.4	0.5	—	0.2	0.5	0.9
Hispanic	—	3.3	3.7	3.6	—	3.2	4.1	5.0

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-8
LSD: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4	5.2	5.6	6.8	6.9
Sex:																				
Male	9.6	7.9	7.1	7.8	8.0	8.1	8.0	7.4	6.7	5.8	5.9	5.5	6.4	6.5	6.5	7.1	6.8	6.7	8.4	8.4
Female	5.6	4.6	3.9	4.5	4.8	4.8	4.7	4.3	3.8	3.1	2.8	3.4	3.9	3.0	3.2	3.6	3.4	4.4	5.1	5.3
College Plans:																				
None or under 4 yrs.	—	7.5	6.7	7.2	8.0	8.2	8.0	7.5	6.9	6.1	5.6	5.9	6.6	5.7	6.5	6.2	6.4	7.6	7.5	7.7
Complete 4 yrs.	—	4.7	4.0	4.6	4.5	4.7	5.0	4.3	3.8	3.1	3.4	3.3	4.3	4.1	4.2	4.8	4.7	4.8	6.4	6.3
Region:																				
Northeast	8.5	8.0	7.2	8.0	7.9	6.8	9.0	8.0	5.6	7.0	5.4	5.1	5.3	4.7	5.1	5.9	6.1	6.6	8.6	8.2
North Central	8.7	7.0	6.5	7.9	7.9	8.5	7.8	7.3	7.0	4.4	5.3	5.3	5.7	4.7	6.0	5.3	5.9	5.5	6.3	7.3
South	5.4	4.7	3.7	3.7	3.4	4.3	3.4	3.9	4.4	3.5	2.8	2.6	4.2	4.7	4.2	4.7	3.4	4.4	5.5	6.3
West	7.6	5.9	5.0	5.8	8.3	6.5	6.3	4.8	4.2	4.5	4.6	5.9	6.2	5.2	4.4	6.4	6.5	7.0	8.5	6.2
Population Density:																				
Large MSA	9.4	7.9	6.4	7.2	7.6	7.3	8.0	7.3	5.7	4.7	4.1	4.4	5.6	5.2	4.6	5.2	4.3	5.7	6.7	7.3
Other MSA	7.4	6.8	5.6	6.1	7.3	6.8	6.9	6.3	6.0	4.9	4.8	4.9	5.4	5.6	5.3	6.1	7.0	5.8	7.6	7.8
Non-MSA	5.7	4.8	4.8	5.8	4.9	5.6	4.9	4.8	4.4	4.2	4.1	4.0	4.4	3.1	4.3	4.2	3.0	5.1	5.6	4.6
Parental Education:																				
1.0-2.0 (Low)	6.1	4.8	4.5	5.0	4.5	5.2	4.8	5.0	4.9	4.1	3.0	3.9	4.4	4.1	3.6	3.4	4.3	3.3	4.6	4.4
2.5-3.0	6.5	6.8	5.8	6.1	6.3	6.8	6.5	6.1	5.1	4.8	4.5	4.6	4.9	3.8	4.3	4.4	4.4	5.2	5.6	6.5
3.5-4.0	6.4	6.7	5.6	6.1	6.7	6.7	6.7	6.4	5.7	4.3	4.7	4.6	4.9	4.2	5.1	6.0	5.5	5.7	7.0	7.4
4.5-5.0	7.0	6.4	5.3	6.7	7.5	5.7	6.4	5.7	5.2	4.3	4.8	4.1	5.8	6.2	5.9	6.2	5.3	5.8	8.3	6.9
5.5-6.0 (High)	6.5	6.4	6.1	7.0	7.4	7.2	7.7	6.0	4.8	5.0	3.8	4.7	6.1	6.2	5.5	7.4	7.1	7.0	8.2	7.9
Race (2-year average):*																				
White	—	—	6.3	6.3	6.8	7.0	7.2	6.9	6.2	5.5	5.0	4.9	5.4	5.8	5.7	6.1	6.3	6.4	7.4	8.0
Black	—	—	1.3	1.3	1.2	1.1	1.0	0.9	0.9	0.7	0.7	1.0	0.8	0.6	0.7	0.6	0.6	0.6	0.6	0.9
Hispanic	—	—	6.1	5.0	4.9	5.2	4.5	5.2	5.0	4.1	3.9	3.9	4.0	3.1	2.3	2.7	3.6	4.1	5.1	5.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-9
Cocaine: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	1.1	1.5	1.7	2.1	2.2	1.9	2.1	2.8
Sex:								
Male	1.4	1.5	1.9	2.1	2.2	2.0	2.5	3.1
Female	0.9	1.5	1.5	2.1	2.2	1.7	1.6	2.5
College Plans:								
None or under 4 yrs.	3.2	4.8	5.4	6.6	4.7	4.0	5.1	6.6
Complete 4 yrs.	0.8	1.0	1.1	1.5	1.7	1.4	1.4	2.0
Region:								
Northeast	1.3	0.8	1.0	2.2	1.5	1.0	2.0	2.4
North Central	0.9	1.4	1.0	1.2	1.7	1.7	1.4	2.2
South	1.1	1.7	2.1	2.5	2.0	1.8	1.9	2.6
West	1.5	2.0	2.7	2.3	3.6	3.2	3.7	4.7
Population Density:								
Large MSA	1.1	1.4	1.3	2.0	1.9	1.6	1.6	2.0
Other MSA	1.1	1.7	2.2	2.4	2.7	2.1	2.3	3.1
Non-MSA	1.2	1.3	1.2	1.4	1.6	1.7	2.1	2.7
Parental Education:								
1.0-2.0 (Low)	2.4	3.2	2.9	3.5	3.3	3.5	3.2	3.8
2.5-3.0	1.4	1.6	2.0	2.3	2.4	1.7	2.2	2.9
3.5-4.0	0.7	1.2	1.8	2.1	2.4	2.1	2.5	3.2
4.5-5.0	0.7	1.0	1.0	1.6	1.6	1.4	1.6	2.1
5.5-6.0 (High)	1.2	1.5	1.1	1.9	1.9	1.5	1.1	1.9
Race (2-year average):*								
White	—	1.2	1.3	1.6	—	2.1	2.0	2.2
Black	—	0.7	0.7	0.7	—	0.6	0.6	1.0
Hispanic	—	3.1	4.0	4.5	—	3.7	3.7	4.9

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-10
Cocaine: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percent who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	3.5	3.1	3.3	3.6
Sex:																				
Male	7.5	7.5	9.3	11.4	14.6	14.8	13.8	13.1	13.2	13.8	14.8	14.3	11.3	9.1	8.1	6.6	4.1	3.7	4.0	4.5
Female	3.9	4.4	4.9	6.5	9.3	9.8	10.4	9.6	9.3	9.1	11.2	10.9	9.2	6.5	4.9	3.8	2.6	2.4	2.3	2.8
College Plans:																				
None or under 4 yrs.	—	6.6	8.1	9.5	13.7	13.2	12.4	12.5	12.2	13.2	14.7	15.7	12.4	9.7	9.3	7.8	4.9	5.1	4.5	5.3
Complete 4 yrs.	—	5.0	5.5	7.7	9.5	10.8	11.5	9.9	9.9	9.7	11.4	10.4	9.0	6.7	5.3	4.1	2.8	2.4	2.8	3.0
Region:																				
Northeast	5.3	6.6	7.9	11.8	13.8	14.2	16.8	16.9	15.2	19.5	20.8	17.9	13.3	9.1	7.3	6.5	3.8	2.8	3.1	3.1
North Central	5.1	5.5	6.3	8.5	10.5	10.9	9.4	9.0	8.0	5.8	8.2	10.1	7.5	6.1	5.3	4.1	3.2	2.5	2.4	3.7
South	5.4	5.1	6.0	6.8	8.5	7.8	6.8	6.3	7.7	7.7	7.5	7.1	7.0	6.2	6.0	4.8	3.0	3.2	3.1	3.4
West	7.8	7.9	10.2	10.7	18.6	20.6	22.1	17.9	19.2	19.3	19.7	20.0	16.4	12.1	8.5	6.6	4.4	4.3	4.9	4.5
Population Density:																				
Large MSA	7.3	8.6	8.6	12.3	16.6	18.7	17.5	17.2	16.9	16.8	18.8	18.8	12.9	9.3	6.4	5.6	4.1	3.6	2.7	3.4
Other MSA	5.9	5.8	7.3	8.9	11.7	11.3	11.5	10.1	11.2	11.0	12.4	12.0	10.1	8.5	7.1	5.4	3.7	3.3	3.9	4.0
Non-MSA	4.3	4.3	5.8	6.4	8.9	8.9	9.4	8.5	7.3	8.3	9.2	9.0	8.1	5.3	5.4	4.8	2.5	2.4	2.7	3.2
Parental Education:																				
1.0-2.0 (Low)	4.5	5.3	5.5	6.3	8.4	9.0	8.3	7.6	9.0	9.4	12.0	10.5	8.7	7.6	6.7	4.7	3.5	3.9	3.5	4.1
2.5-3.0	4.6	6.1	6.8	8.7	11.1	11.2	10.5	11.0	9.8	10.9	12.7	12.9	9.9	7.4	6.4	5.6	3.8	3.3	3.0	4.0
3.5-4.0	4.5	5.9	7.2	9.0	13.2	13.3	13.3	12.5	11.7	12.2	14.0	13.6	11.2	7.2	6.4	5.6	3.7	3.0	3.8	3.8
4.5-5.0	6.3	7.6	8.1	10.4	14.0	13.6	14.9	13.6	13.1	12.2	13.7	12.2	10.0	8.7	7.1	4.4	3.1	2.9	3.0	3.1
5.5-6.0 (High)	5.2	7.1	9.5	11.6	15.2	16.3	16.2	13.8	15.1	13.4	11.9	12.5	10.8	8.1	5.8	5.5	2.4	2.6	2.4	3.3
Race (2-year average):*																				
White	—	—	6.5	8.3	10.9	12.8	13.0	12.6	11.8	11.9	13.0	13.5	12.0	9.6	7.6	6.3	4.6	3.3	3.1	3.5
Black	—	—	4.8	4.6	4.6	5.2	4.8	5.2	7.2	6.3	5.3	5.8	4.8	3.8	2.9	1.7	1.5	1.2	0.8	0.9
Hispanic	—	—	7.2	7.5	8.9	11.2	12.4	12.1	11.4	13.3	16.3	16.7	14.0	9.9	7.8	7.4	6.1	5.2	5.8	5.4

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-11
Crack: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	0.7	0.9	1.0	1.3	0.9	0.9	1.1	1.4
Sex:								
Male	0.8	0.9	1.1	1.3	0.9	0.9	1.3	1.6
Female	0.5	0.9	0.9	1.2	0.8	0.9	0.7	1.0
College Plans:								
None or under 4 yrs.	2.0	2.9	3.4	4.6	2.4	2.1	2.7	3.4
Complete 4 yrs.	0.4	0.6	0.6	0.8	0.6	0.6	0.7	0.9
Region:								
Northeast	0.5	0.4	0.4	1.4	0.5	0.4	1.1	1.4
North Central	0.6	1.0	0.8	0.9	0.9	0.9	0.8	1.0
South	0.7	1.0	1.2	1.6	1.0	0.8	0.9	1.3
West	0.8	1.3	1.4	1.3	1.1	1.4	1.7	1.9
Population Density:								
Large MSA	0.5	0.8	0.7	1.3	0.9	0.8	0.7	0.8
Other MSA	0.7	1.1	1.2	1.4	0.9	0.9	1.1	1.4
Non-MSA	0.8	0.8	0.9	1.0	0.9	0.9	1.2	1.6
Parental Education:								
1.0-2.0 (Low)	1.7	2.2	1.8	2.8	1.3	1.7	1.8	1.9
2.5-3.0	0.7	0.8	1.0	1.4	1.0	0.8	1.0	1.1
3.5-4.0	0.4	0.7	1.2	0.9	0.9	1.0	1.4	1.5
4.5-5.0	0.4	0.6	0.5	1.1	0.7	0.6	0.7	1.0
5.5-6.0 (High)	0.8	1.0	0.6	1.4	0.7	0.9	0.5	1.1
Race (2-year average):*								
White	—	0.7	0.8	1.0	—	0.9	0.9	1.1
Black	—	0.4	0.4	0.5	—	0.3	0.4	0.8
Hispanic	—	1.9	2.0	2.1	—	1.5	1.7	1.9

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-12
Crack: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	—	—	—	—	—	—	—	—	—	—	—	4.1	3.9	3.1	3.1	1.9	1.5	1.5	1.5	1.9
Sex:																				
Male	—	—	—	—	—	—	—	—	—	—	—	4.2	4.6	4.0	4.3	2.3	1.8	1.7	1.9	2.4
Female	—	—	—	—	—	—	—	—	—	—	—	3.6	3.0	2.0	1.8	1.4	1.0	1.0	1.1	1.3
College Plans:																				
None or under 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	5.2	5.1	4.1	3.8	3.5	2.3	2.6	2.7	3.3
Complete 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	2.8	2.7	2.3	2.7	1.2	1.1	1.0	1.2	1.4
Region:																				
Northeast	—	—	—	—	—	—	—	—	—	—	—	6.0	4.0	2.3	3.3	2.0	1.3	1.3	1.2	1.5
North Central	—	—	—	—	—	—	—	—	—	—	—	3.1	3.5	2.4	2.2	1.6	1.5	1.4	1.3	2.2
South	—	—	—	—	—	—	—	—	—	—	—	1.6	2.8	2.6	3.3	1.8	1.2	1.2	1.5	1.6
West	—	—	—	—	—	—	—	—	—	—	—	7.5	6.1	5.6	3.8	2.7	1.8	2.1	2.1	2.3
Population Density:																				
Large MSA	—	—	—	—	—	—	—	—	—	—	—	5.9	4.7	3.9	3.4	1.6	1.2	1.3	1.3	1.4
Other MSA	—	—	—	—	—	—	—	—	—	—	—	3.5	3.5	3.2	3.3	2.0	1.7	1.6	1.8	2.0
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	3.5	3.7	2.0	2.2	2.0	1.2	1.3	1.4	1.9
Parental Education:																				
1.0-2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	1.2	3.6	3.3	3.1	2.2	1.6	1.9	2.6	2.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	5.3	4.2	2.6	3.1	2.2	1.5	1.9	1.6	2.2
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	4.0	4.0	3.4	2.8	1.8	1.7	1.3	1.5	1.8
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	2.9	3.4	3.1	2.6	1.1	0.9	1.0	1.4	1.1
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	3.7	2.4	2.1	3.7	1.8	1.1	0.8	1.0	1.8
Race (2-year average):*																				
White	—	—	—	—	—	—	—	—	—	—	—	—	3.8	3.4	3.1	2.1	1.6	1.3	1.3	1.6
Black	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.5	2.0	1.3	1.0	0.6	0.6	0.9
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	5.5	3.7	3.2	4.2	3.4	2.7	2.5	2.4

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on a single questionnaire form in 1986; N is one-fifth of N indicated. Data based on two questionnaire forms in 1987-1989; N is two-fifths of N indicated in 1987-1988 and two-sixths of N indicated in 1989. Data based on six questionnaire forms in 1990-1994.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

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TABLE C-13

Other Cocaine:[a] Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	1.0	1.2	1.3	1.7	2.1	1.7	1.8	2.4
Sex:								
Male	1.1	1.2	1.5	1.7	2.0	1.9	2.2	2.7
Female	0.8	1.2	1.2	1.8	2.1	1.5	1.4	2.1
College Plans:								
None or under 4 yrs.	2.7	4.2	4.1	5.6	4.4	3.3	4.5	5.9
Complete 4 yrs.	0.6	0.7	0.9	1.2	1.6	1.3	1.3	1.7
Region:								
Northeast	1.2	0.7	0.9	1.9	1.3	1.0	1.8	2.0
North Central	0.6	1.0	0.7	0.9	1.6	1.3	1.3	1.8
South	1.0	1.5	1.6	2.0	1.9	1.6	1.7	2.2
West	1.3	1.5	2.1	2.0	3.4	3.1	3.2	4.3
Population Density:								
Large MSA	0.9	1.1	1.0	1.7	1.6	1.5	1.4	1.7
Other MSA	0.9	1.4	1.8	2.0	2.6	2.0	2.0	2.7
Non-MSA	1.1	0.9	0.7	1.2	1.4	1.4	1.9	2.5
Parental Education:								
1.0-2.0 (Low)	2.1	2.7	2.2	3.1	3.1	2.7	2.7	3.1
2.5-3.0	1.2	1.1	1.5	2.0	2.2	1.6	2.0	2.6
3.5-4.0	0.6	1.0	1.5	1.9	2.2	2.0	2.2	2.7
4.5-5.0	0.6	0.8	0.8	1.1	1.6	1.3	1.4	1.8
5.5-6.0 (High)	1.0	1.2	0.8	1.2	1.8	1.3	0.9	1.6
Race (2-year average):[b]								
White	—	0.9	1.0	1.2	—	1.9	1.8	1.9
Black	—	0.6	0.5	0.6	—	0.5	0.5	0.9
Hispanic	—	2.6	3.3	4.0	—	3.4	3.4	4.6

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] "Other cocaine" refers to any form of cocaine other than crack: for the most part, this means powdered cocaine.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-14
Other Cocaine:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.8	7.4	5.2	4.6	3.2	2.6	2.9	3.0
Sex:																				
Male	—	—	—	—	—	—	—	—	—	—	—	—	10.1	8.0	6.5	5.8	3.7	3.1	3.7	3.7
Female	—	—	—	—	—	—	—	—	—	—	—	—	9.1	6.2	4.0	3.2	2.4	2.0	2.0	2.3
College Plans:																				
None or under 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	9.8	6.0	7.3	6.3	4.0	4.0	3.9	4.3
Complete 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	8.3	6.7	4.2	3.7	2.8	2.0	2.5	2.5
Region:																				
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	12.9	7.0	4.9	5.6	3.4	2.8	2.3	2.8
North Central	—	—	—	—	—	—	—	—	—	—	—	—	8.2	5.6	4.8	3.7	2.9	2.2	2.3	3.5
South	—	—	—	—	—	—	—	—	—	—	—	—	5.8	5.8	4.6	4.1	2.8	2.5	2.6	2.6
West	—	—	—	—	—	—	—	—	—	—	—	—	15.3	13.4	7.5	6.1	3.9	3.1	4.6	3.5
Population Density:																				
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	13.3	9.8	5.6	5.0	3.7	3.1	2.6	2.9
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	8.9	7.8	5.4	4.7	3.3	2.5	3.6	3.3
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	8.0	4.5	4.4	4.1	2.5	2.3	2.0	2.6
Parental Education:																				
1.0-2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	5.3	4.9	3.3	3.4	3.5	3.7	3.9	2.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	10.5	6.5	4.6	5.0	3.5	2.3	2.3	3.2
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	10.5	7.2	5.1	4.7	3.2	2.6	3.3	3.4
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	9.0	7.7	6.1	4.1	2.7	2.3	2.9	2.6
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	9.7	9.0	6.5	5.4	2.4	2.0	1.7	3.1
Race (2-year average):[b]																				
White	—	—	—	—	—	—	—	—	—	—	—	—	—	9.3	7.0	5.3	4.2	2.9	2.6	2.9
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	1.4	0.7	1.0	1.0	0.7	0.8
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	6.3	5.1	5.1	5.0	4.3	5.1	5.1

NOTES: '—' indicates data not available.
See table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on a single questionnaire form in 1987-1989; N is one-fifth of N indicated in 1987-1988 and one-sixth of N indicated in 1989. Data based on four questionnaire forms in 1990-1994; N is four-sixths of N indicated.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] "Other cocaine" refers to any form of cocaine other than crack: for the most part, this means powdered cocaine.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-15
Heroin: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	0.7	0.7	0.7	1.2	0.5	0.6	0.7	0.9
Sex:								
Male	0.9	0.8	0.8	1.3	0.7	0.8	0.9	1.0
Female	0.5	0.7	0.5	0.9	0.4	0.4	0.4	0.8
College Plans:								
None or under 4 yrs.	2.1	2.7	2.0	3.9	1.4	1.4	1.9	2.0
Complete 4 yrs.	0.4	0.4	0.5	0.7	0.3	0.4	0.4	0.7
Region:								
Northeast	0.5	0.6	0.7	1.3	0.4	0.6	0.6	0.6
North Central	0.4	0.8	0.5	1.1	0.6	0.6	0.8	0.9
South	0.8	0.7	0.7	1.1	0.6	0.5	0.6	1.0
West	1.0	0.7	1.1	1.1	0.4	0.8	0.5	1.2
Population Density:								
Large MSA	0.5	0.7	0.7	1.1	0.6	0.6	0.7	0.8
Other MSA	0.7	0.8	0.9	1.2	0.5	0.6	0.6	0.9
Non-MSA	0.8	0.7	0.4	1.0	0.4	0.6	0.7	1.0
Parental Education:								
1.0-2.0 (Low)	1.5	1.4	0.8	2.0	0.4	0.5	1.2	1.3
2.5-3.0	0.9	0.7	0.6	1.1	0.8	0.7	0.7	0.8
3.5-4.0	0.6	0.6	0.7	1.3	0.5	0.6	0.8	0.9
4.5-5.0	0.4	0.5	0.8	0.8	0.4	0.5	0.3	0.9
5.5-6.0 (High)	0.5	0.8	0.6	1.3	0.4	0.5	0.8	0.9
Race (2-year average):[a]								
White	—	0.6	0.6	0.8	—	0.6	0.7	0.8
Black	—	0.4	0.3	0.6	—	0.3	0.4	0.6
Hispanic	—	1.4	1.4	1.5	—	0.7	0.7	0.7

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-16
Heroin: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.6
Sex:																				
Male	1.2	1.0	1.2	1.1	0.6	0.6	0.6	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.9	0.6	0.6	0.8	0.7	0.8
Female	0.8	0.5	0.4	0.6	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4
College Plans:																				
None or under 4 yrs.	—	0.9	1.1	1.0	0.7	0.6	0.5	0.7	0.9	0.6	0.7	0.8	0.5	0.8	0.9	0.6	0.5	0.9	1.0	1.1
Complete 4 yrs.	—	0.6	0.5	0.6	0.3	0.3	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.3	0.5	0.4	0.4	0.5	0.4	0.5
Region:																				
Northeast	1.1	0.7	0.7	0.6	0.6	0.5	0.5	0.9	0.6	0.6	0.8	0.7	0.6	0.5	0.9	0.8	0.2	0.5	0.9	0.7
North Central	1.3	1.0	1.0	0.8	0.5	0.7	0.6	0.5	0.4	0.6	0.6	0.4	0.6	0.3	0.6	0.3	0.8	0.6	0.5	0.9
South	0.9	0.7	0.9	1.1	0.6	0.3	0.5	0.5	0.7	0.5	0.6	0.5	0.4	0.5	0.6	0.5	0.4	0.6	0.4	0.6
West	0.7	0.6	0.5	0.8	0.2	0.4	0.5	0.3	0.5	0.4	0.3	0.5	0.5	0.7	0.7	0.3	0.3	0.8	0.5	0.4
Population Density:																				
Large MSA	1.3	1.0	0.5	0.7	0.4	0.3	0.3	0.7	0.6	0.6	0.7	0.7	0.3	0.4	0.5	0.4	0.4	0.4	0.6	0.3
Other MSA	0.9	1.0	0.8	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.7	0.4	0.6	0.5	0.7	0.5	0.4	0.7	0.5	0.8
Non-MSA	1.0	0.4	1.1	1.0	0.5	0.6	0.7	0.6	0.7	0.7	0.4	0.5	0.5	0.5	0.8	0.5	0.6	0.7	0.5	0.5
Parental Education:																				
1.0-2.0 (Low)	1.2	0.8	0.8	0.8	0.6	0.6	0.4	0.4	0.5	0.6	0.8	0.9	0.5	0.5	0.9	0.8	0.5	0.7	0.3	0.9
2.5-3.0	0.8	0.9	0.8	0.9	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.7	0.7	0.4	0.4	0.6	0.4	0.8
3.5-4.0	0.6	0.8	0.9	0.7	0.4	0.4	0.5	0.3	0.5	0.5	0.5	0.5	0.6	0.4	0.6	0.4	0.4	0.6	0.6	0.4
4.5-5.0	1.2	1.4	0.6	0.9	0.6	0.4	0.3	0.6	0.4	0.4	0.7	0.3	0.3	0.3	0.6	0.4	0.6	0.7	0.7	0.3
5.5-6.0 (High)	1.2	0.6	1.1	1.0	0.8	0.4	0.7	1.1	0.8	0.5	0.6	0.5	0.7	0.4	0.4	0.5	0.5	0.3	0.4	0.9
Race (2-year average):*																				
White	—	—	0.8	0.8	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5
Black	—	—	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.7	0.6	0.3	0.2	0.5	0.4	0.3
Hispanic	—	—	1.2	2.0	1.7	0.4	0.3	0.4	0.6	1.1	1.0	0.9	0.9	0.5	0.5	0.6	0.6	0.9	0.7	0.5

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-17
Other Opiates:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	5.7	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5	3.5	3.3	3.6	3.8
Sex:																				
Male	6.6	6.8	7.3	6.9	7.3	7.1	6.5	6.0	6.0	6.2	6.8	5.9	5.6	5.1	4.9	5.0	3.9	3.3	3.6	4.3
Female	4.8	4.7	5.4	5.1	5.1	5.4	5.3	4.6	4.2	4.2	5.1	4.6	4.9	4.1	3.8	3.9	3.1	3.3	3.3	3.4
College Plans:																				
None or under 4 yrs.	—	6.8	8.0	6.8	7.3	7.4	7.2	6.1	6.1	6.1	6.6	6.7	6.1	4.8	5.3	5.7	3.8	4.3	4.2	4.9
Complete 4 yrs.	—	4.6	4.7	4.9	5.0	5.1	4.8	4.6	4.3	4.3	5.4	4.3	4.8	4.6	3.9	4.0	3.5	3.0	3.3	3.5
Region:																				
Northeast	6.1	6.5	6.6	6.8	7.0	5.7	7.2	5.6	5.6	6.7	7.3	5.7	6.0	3.7	4.7	4.1	3.2	3.7	4.6	3.5
North Central	6.2	6.2	7.5	6.7	6.1	7.6	6.2	5.5	5.3	4.8	6.3	5.8	5.2	4.4	5.7	4.6	4.2	3.6	3.2	4.7
South	4.9	5.0	5.2	4.5	5.2	5.0	4.1	4.5	4.4	4.5	3.8	4.2	4.3	4.7	3.2	4.1	2.7	2.7	3.2	3.8
West	5.4	5.0	6.0	6.7	7.1	6.8	7.2	6.2	5.2	5.3	7.1	5.4	6.1	5.7	4.9	5.3	4.4	3.5	4.0	3.1
Population Density:																				
Large MSA	7.3	6.7	6.7	6.9	7.3	6.9	6.9	5.2	6.0	5.2	6.0	4.8	5.2	4.0	4.1	3.8	3.3	3.5	3.1	4.3
Other MSA	5.5	6.1	6.3	5.9	6.3	7.0	6.3	5.7	5.3	5.1	6.4	5.6	5.3	5.2	4.9	4.6	3.9	3.1	3.7	3.7
Non-MSA	4.8	4.6	6.2	5.4	5.3	4.8	4.8	4.9	4.1	5.2	5.2	5.0	5.2	4.4	3.8	4.8	3.1	3.6	3.7	3.6
Parental Education:																				
1.0-2.0 (Low)	5.4	5.0	5.1	5.0	5.2	5.2	4.8	4.8	4.8	4.7	4.5	4.7	4.1	3.9	3.6	3.8	3.8	3.5	3.8	3.0
2.5-3.0	5.1	5.9	6.4	6.2	5.9	5.8	5.6	4.9	5.0	5.2	5.5	5.0	4.4	4.3	4.0	4.1	3.2	3.5	2.9	3.8
3.5-4.0	4.2	6.3	6.7	6.0	6.3	6.9	6.6	5.2	4.5	5.1	6.5	6.0	5.6	4.3	4.6	4.6	3.7	3.2	3.7	3.4
4.5-5.0	6.4	6.3	6.6	6.4	6.7	7.0	6.3	6.4	6.0	5.6	6.4	4.8	5.4	5.4	4.2	4.7	3.6	3.4	3.7	4.3
5.5-6.0 (High)	6.5	6.5	7.9	6.1	7.8	6.8	6.8	7.1	5.3	4.9	6.8	5.4	7.8	5.6	6.4	5.7	4.1	3.2	4.5	4.8
Race (2-year average):[b]																				
White	—	—	6.6	6.7	6.6	6.8	6.7	6.2	5.8	5.7	6.3	6.3	6.0	5.8	5.3	5.2	4.7	4.1	4.1	4.3
Black	—	—	2.2	2.0	1.8	1.7	1.9	1.8	1.7	1.6	1.6	1.7	1.6	1.5	1.5	1.4	1.1	0.9	1.0	1.5
Hispanic	—	—	3.8	3.5	3.5	3.7	4.3	4.1	4.0	4.2	3.6	3.0	2.4	2.2	2.5	2.4	2.3	2.1	2.3	2.2

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] "Other opiates" refers to all opiate-type drugs other than heroin. Only drug use that was not under a doctor's orders is included here.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-18

Stimulants:[a] Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	6.2	6.5	7.2	7.9	8.2	8.2	9.6	10.2
Sex:								
Male	5.5	5.2	5.6	6.5	7.0	7.0	8.2	8.6
Female	6.9	7.9	8.8	9.3	9.3	9.3	10.9	11.7
College Plans:								
None or under 4 yrs.	11.6	12.9	14.6	14.5	13.4	14.4	15.5	16.6
Complete 4 yrs.	5.4	5.7	6.3	7.0	7.1	6.9	8.4	8.9
Region:								
Northeast	5.1	4.3	5.9	6.9	6.1	5.4	7.8	8.7
North Central	7.1	8.0	7.3	7.8	10.3	9.4	9.5	10.5
South	6.1	6.6	7.3	8.3	8.1	8.7	10.9	11.2
West	6.0	6.6	8.6	8.4	7.7	8.4	9.5	9.4
Population Density:								
Large MSA	5.8	4.8	5.6	6.5	7.5	6.7	7.6	7.5
Other MSA	6.2	7.5	8.2	8.6	7.9	8.0	9.5	10.6
Non-MSA	6.7	7.0	7.5	7.5	9.3	10.0	11.6	11.2
Parental Education:								
1.0-2.0 (Low)	8.3	8.4	10.2	11.2	10.0	11.9	12.3	10.8
2.5-3.0	6.6	7.3	8.2	9.0	9.7	8.9	10.5	11.6
3.5-4.0	6.7	7.4	7.8	8.5	7.9	8.4	10.5	11.1
4.5-5.0	5.3	5.5	6.4	6.6	7.4	6.6	7.5	8.9
5.5-6.0 (High)	5.7	5.4	5.3	5.7	6.9	6.9	8.3	7.3
Race (2-year average):[b]								
White	—	6.8	7.4	8.1	—	9.4	10.1	11.0
Black	—	3.3	3.4	3.9	—	2.8	3.0	4.0
Hispanic	—	7.2	7.7	8.6	—	6.2	7.0	7.7

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] "Stimulants" refers specifically to amphetamine stimulants. Only drug use that was not under a doctor's orders is included here.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-19
Stimulants:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	16.2	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1	8.2	7.1	8.4	9.4
Sex:																				
Male	15.6	15.8	16.0	16.9	18.4	19.7	24.8	19.6	17.2	16.8	14.9	12.7	11.8	10.8	11.1	9.4	8.3	7.2	8.2	9.2
Female	16.5	15.4	16.4	17.1	17.8	21.8	26.9	20.3	17.9	18.2	16.4	13.8	12.4	10.9	10.5	8.6	7.9	6.9	8.5	9.4
College Plans:																				
None or under 4 yrs.	—	19.3	20.5	20.0	21.8	25.8	30.9	23.7	20.9	22.2	19.7	17.7	16.0	13.9	15.1	12.6	11.0	9.7	11.0	13.4
Complete 4 yrs.	—	11.9	11.5	13.7	14.5	16.5	22.3	16.8	14.5	14.2	13.3	10.9	10.2	9.5	9.1	7.4	7.0	6.1	7.6	8.0
Region:																				
Northeast	16.5	14.7	16.8	19.6	22.0	22.0	28.8	21.5	17.9	19.0	16.8	12.6	10.4	8.4	9.0	6.3	6.5	6.2	8.1	7.4
North Central	18.7	17.8	19.0	18.2	18.3	22.2	30.1	24.1	20.4	20.3	17.3	15.2	13.5	12.2	13.3	10.7	10.1	8.4	8.9	12.0
South	12.6	13.7	13.2	14.0	14.0	17.7	19.6	16.4	15.4	15.1	12.8	11.5	11.5	10.8	9.9	8.9	7.9	6.7	8.3	9.0
West	18.5	17.2	16.0	17.8	20.7	22.1	26.6	18.7	18.2	16.9	17.3	15.0	13.4	11.8	11.1	10.2	7.8	6.9	8.3	8.4
Population Density:																				
Large MSA	19.6	15.4	15.3	17.7	19.5	21.9	28.0	21.6	18.1	17.7	15.0	11.2	10.9	8.8	7.1	6.5	6.2	6.0	6.5	7.6
Other MSA	15.5	16.3	17.1	17.5	18.9	20.8	25.5	20.7	19.6	17.1	15.7	14.2	11.9	11.9	11.4	9.6	8.4	6.7	8.5	9.3
Non-MSA	14.8	15.4	15.9	16.0	16.6	19.9	25.1	18.8	15.6	18.5	16.6	14.1	14.0	11.3	13.3	10.6	9.5	9.0	9.8	10.9
Parental Education:																				
1.0-2.0 (Low)	15.7	13.4	14.5	14.9	16.0	19.1	22.3	18.7	15.7	17.1	14.5	11.9	11.9	9.8	10.4	7.6	9.5	7.0	9.0	10.4
2.5-3.0	16.7	16.9	17.4	17.3	18.4	22.2	26.7	21.9	19.6	19.2	17.0	15.2	13.3	11.1	11.7	9.7	9.1	7.7	8.6	10.3
3.5-4.0	14.9	16.6	16.1	18.2	19.6	21.5	26.9	21.7	19.4	18.5	17.2	14.3	12.6	11.8	12.3	10.6	8.9	7.7	9.1	9.4
4.5-5.0	14.5	16.8	15.9	16.9	17.1	20.0	26.2	19.1	18.9	15.9	15.1	12.0	11.7	10.3	9.4	8.1	6.5	6.3	8.0	9.5
5.5-6.0 (High)	12.0	14.6	16.0	17.2	20.4	17.9	26.8	20.5	16.1	14.0	10.9	10.1	10.4	10.0	9.1	7.3	5.7	5.8	7.6	7.1
Race (2-year average)[b]																				
White	—	—	17.3	18.2	19.2	21.3	26.4	23.6	22.3	20.5	18.9	16.4	14.3	13.0	12.4	11.4	9.8	8.8	9.0	10.4
Black	—	—	5.3	4.7	4.2	5.3	5.8	6.0	5.7	4.7	4.3	4.0	3.8	3.9	3.6	3.1	2.7	2.2	2.3	3.4
Hispanic	—	—	12.3	12.2	12.8	14.5	17.5	12.3	11.5	13.2	14.6	10.8	8.7	9.6	9.0	7.0	6.1	6.0	6.2	6.4

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Beginning in 1982, the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of nonprescription stimulants. The prevalence rate for twelfth graders dropped slightly as a result of this methodological change. (For 1982 and 1983, the data presented here are based on only three of the five questionnaire forms.) Only drug use that was not under a doctor's orders is included here. Eighth and tenth graders have received only the revised version of the question.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-20
Barbiturates:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4	3.4	2.8	3.4	4.1
Sex:																				
Male	12.3	9.9	10.2	8.4	7.6	7.3	7.2	5.9	5.9	5.5	5.2	4.7	4.0	3.4	3.5	3.8	3.4	2.9	3.4	4.3
Female	9.9	9.2	8.4	7.7	7.0	6.0	5.8	5.0	4.2	4.0	3.9	3.8	3.2	3.0	3.0	3.0	3.2	2.6	3.3	3.8
College Plans:																				
None or under 4 yrs.	—	11.6	11.4	9.1	9.3	9.0	8.1	7.4	6.7	6.2	6.2	6.1	4.7	4.1	4.8	4.7	4.3	3.9	3.8	5.4
Complete 4 yrs.	—	7.3	6.8	6.8	5.2	4.8	5.1	3.8	3.8	3.7	3.6	3.0	3.0	2.7	2.5	2.8	2.9	2.3	3.2	3.7
Region:																				
Northeast	11.5	10.4	9.2	9.6	9.6	6.9	6.8	5.6	4.7	5.1	5.3	5.2	4.2	2.5	3.2	2.9	2.8	2.7	3.5	4.0
North Central	12.8	10.4	10.7	7.9	6.9	7.3	7.5	5.4	6.1	4.9	4.9	4.2	3.3	2.5	3.2	3.5	3.5	2.7	3.5	4.1
South	9.9	9.7	9.3	7.8	7.3	7.0	5.5	6.3	5.2	5.2	4.2	4.1	3.7	4.1	3.7	4.0	3.6	3.0	3.6	4.8
West	10.0	6.7	6.6	6.6	5.7	5.2	6.5	3.9	4.0	4.2	4.1	3.3	3.2	3.2	2.7	2.9	3.3	2.5	2.7	2.8
Population Density:																				
Large MSA	11.1	10.2	8.1	8.1	8.3	6.6	6.9	5.3	5.2	4.4	4.4	3.7	3.3	2.8	2.6	2.6	2.4	2.4	2.6	3.6
Other MSA	11.3	9.8	9.9	8.2	7.3	6.5	6.4	5.7	5.3	4.9	4.2	4.4	3.6	3.4	3.1	3.6	3.9	2.6	3.1	4.2
Non-MSA	9.8	9.0	9.5	8.1	7.0	7.2	6.6	5.5	5.0	5.5	5.4	4.5	3.9	3.2	4.4	3.9	3.3	3.4	4.3	4.1
Parental Education:																				
1.0-2.0 (Low)	10.3	9.1	8.0	7.5	7.8	8.0	6.5	5.8	6.1	4.7	5.0	4.8	3.8	4.3	4.1	3.1	3.6	3.9	3.8	4.5
2.5-3.0	10.3	10.2	10.3	8.2	7.3	7.2	6.5	5.7	5.7	5.2	5.3	4.6	3.6	3.1	3.4	3.7	3.7	2.4	3.6	4.5
3.5-4.0	9.5	9.6	9.0	8.3	7.4	6.3	6.5	5.1	4.6	5.0	4.4	4.4	3.2	2.9	3.2	3.9	3.0	2.8	2.8	4.0
4.5-5.0	10.7	10.1	9.1	7.8	6.6	5.9	6.4	5.0	4.4	4.3	4.1	3.3	3.9	3.3	2.8	3.1	3.3	2.9	3.4	4.0
5.5-6.0 (High)	9.0	10.3	8.3	8.0	7.2	5.4	6.8	5.8	3.7	4.0	3.1	3.4	3.6	3.1	3.4	2.9	3.6	2.4	3.8	3.6
Race (2-year average):[b]																				
White	—	—	10.2	9.3	8.2	7.5	7.2	6.5	5.8	5.5	5.1	4.7	4.2	3.7	3.5	3.7	3.8	3.5	3.6	4.3
Black	—	—	3.3	3.2	2.6	2.5	2.4	2.0	1.7	1.6	1.6	1.6	1.7	1.5	1.1	1.1	1.2	1.1	1.0	1.5
Hispanic	—	—	7.4	5.8	5.8	5.8	5.7	5.1	4.1	4.4	4.6	3.6	2.8	2.8	3.2	2.8	2.4	2.2	1.9	2.6

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Only drug use that was not under a doctor's orders is included here.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-21
Tranquilizers:[a] Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	1.8	2.0	2.1	2.4	3.2	3.5	3.3	3.3
Sex:								
Male	1.5	1.6	1.8	1.9	2.5	2.7	3.2	3.0
Female	2.1	2.3	2.4	2.8	3.8	4.3	3.2	3.6
College Plans:								
None or under 4 yrs.	3.9	4.9	3.6	5.1	5.0	6.0	5.8	6.0
Complete 4 yrs.	1.5	1.5	1.9	2.0	2.8	3.1	2.7	2.8
Region:								
Northeast	1.0	1.6	1.7	2.5	2.7	2.8	3.4	2.8
North Central	1.4	1.9	1.3	1.7	2.4	3.0	2.5	2.6
South	2.6	2.5	2.4	2.6	4.2	4.5	3.9	4.2
West	1.8	1.6	3.0	2.7	2.9	3.2	3.2	3.6
Population Density:								
Large MSA	1.8	2.1	1.7	2.5	3.2	3.3	2.7	2.5
Other MSA	1.7	1.8	2.5	2.6	3.0	3.8	3.3	3.8
Non-MSA	2.2	2.2	1.6	1.9	3.5	3.3	3.6	3.0
Parental Education:								
1.0-2.0 (Low)	3.6	3.8	2.5	3.2	3.3	5.3	4.8	4.2
2.5-3.0	1.6	2.1	2.5	2.6	3.6	3.5	3.1	3.3
3.5-4.0	2.0	2.2	2.1	2.6	3.2	3.4	3.5	3.4
4.5-5.0	1.4	0.9	1.8	2.0	2.5	3.9	2.9	2.9
5.5-6.0 (High)	1.8	1.9	1.7	2.1	3.5	2.3	3.1	3.4
Race (2-year average):[b]								
White	—	2.0	2.0	2.2	—	4.0	3.8	3.6
Black	—	0.9	1.1	1.2	—	0.9	0.9	0.9
Hispanic	—	2.7	3.1	3.4	—	2.9	3.3	3.1

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Only drug use that was not under a doctor's orders is included here.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-22
Tranquilizers:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last twelve months																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5	3.6	2.8	3.5	3.7
Sex:																				
Male	10.0	9.4	10.2	9.7	9.9	9.0	8.0	6.9	7.0	6.3	6.4	5.9	5.2	4.7	4.0	3.5	3.5	2.7	3.5	4.0
Female	11.1	11.0	11.4	10.1	9.3	8.5	7.7	7.1	6.7	5.8	5.7	5.8	5.8	4.8	3.5	3.5	3.6	3.0	3.3	3.5
College Plans:																				
None or under 4 yrs.	—	11.5	12.3	11.1	11.0	10.7	9.4	8.0	8.0	7.4	6.8	7.2	6.7	5.1	4.8	4.3	4.2	3.9	3.9	4.5
Complete 4 yrs.	—	8.9	9.0	8.6	8.1	7.2	6.9	6.3	5.8	5.2	5.5	5.1	4.9	4.6	3.3	3.2	3.4	2.5	3.3	3.5
Region:																				
Northeast	9.2	9.7	10.4	10.9	11.5	8.6	8.3	7.8	6.8	6.8	7.1	6.4	6.9	4.5	3.7	2.9	3.0	3.0	3.7	3.5
North Central	10.6	10.1	11.0	8.8	7.5	8.2	7.8	6.2	6.8	5.6	6.0	5.5	4.5	3.7	3.1	2.9	3.0	2.3	2.8	3.1
South	11.3	11.7	11.4	10.5	10.4	9.5	7.8	7.4	7.4	6.9	5.9	6.3	5.7	6.0	4.4	4.3	4.0	3.5	4.2	4.8
West	11.7	8.5	9.6	8.9	9.4	8.6	8.0	6.4	6.2	4.9	5.3	4.8	5.2	4.4	3.4	3.9	4.4	2.3	3.0	2.8
Population Density:																				
Large MA	11.2	9.6	9.6	10.3	9.9	8.7	8.3	7.0	7.0	5.4	5.8	5.3	5.8	4.7	3.1	3.6	2.5	2.9	2.9	4.0
Other MA	11.0	11.3	11.4	10.1	10.2	9.3	8.1	7.2	7.2	6.1	6.0	5.7	5.6	5.0	3.5	3.7	4.1	2.7	3.6	3.7
Non-MA	9.9	9.5	11.0	9.2	8.7	8.0	7.5	6.8	6.5	6.8	6.5	6.4	5.2	4.5	4.9	3.3	3.7	3.1	3.7	3.5
Parental Education:																				
1.0-2.0 (Low)	11.2	10.1	9.4	9.4	9.1	7.8	7.1	6.1	6.0	6.5	5.3	6.7	5.7	3.9	3.6	3.4	4.0	3.9	3.3	4.2
2.5-3.0	9.8	10.3	11.5	10.1	8.8	9.1	8.0	7.3	7.2	6.5	6.2	5.8	5.4	4.6	3.9	3.2	3.6	2.8	3.3	3.5
3.5-4.0	9.8	11.2	11.1	9.5	10.4	8.9	8.3	6.7	6.9	5.8	6.4	6.5	5.3	4.5	3.4	4.4	3.1	2.7	3.5	3.6
4.5-5.0	11.3	11.7	11.4	10.5	10.0	8.1	7.4	7.6	6.6	5.8	6.3	4.7	5.9	5.5	3.8	3.1	3.9	3.0	3.4	3.7
5.5-6.0 (High)	9.3	12.0	10.1	11.0	11.4	10.3	9.1	7.6	7.1	6.3	5.5	5.4	5.4	5.6	4.9	4.0	4.0	2.2	4.2	4.2
Race (2-year average):[b]																				
White	—	—	11.4	11.1	10.5	9.9	9.1	8.3	7.8	7.3	6.8	6.6	6.3	5.9	5.0	4.2	4.1	3.7	3.7	4.2
Black	—	—	4.3	4.2	3.6	3.1	3.0	2.5	2.3	2.1	1.7	1.7	2.0	2.0	1.2	0.7	0.9	1.3	1.0	1.1
Hispanic	—	—	8.4	8.2	7.4	6.4	5.7	5.8	5.1	5.3	5.0	4.4	3.7	2.5	1.6	1.9	2.7	2.4	2.0	2.4

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Only drug use that was not under a doctor's orders is included here.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-23
Alcohol: Trends in Thirty-Day Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last thirty days							
	8th Grade				10th Grade			
	1991	1992	1993[a]	1994	1991	1992	1993[a]	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	25.1	26.1	26.2	—	42.8	39.9	41.5	—
			24.3	25.5			38.2	39.2
Sex:								
Male	26.3	26.3	26.7	—	45.5	41.6	43.4	—
			25.3	26.5			40.6	43.5
Female	23.8	25.9	26.1	—	40.2	38.3	39.4	—
			23.7	24.7			35.6	34.8
College Plans:								
None or under 4 yrs.	37.2	39.6	39.2	—	53.6	49.5	53.5	—
			41.1	41.4			48.6	52.0
Complete 4 yrs.	23.1	24.2	24.8	—	40.6	37.9	39.1	—
			22.2	23.6			36.1	36.4
Region:								
Northeast	24.3	23.8	24.8	—	48.0	42.3	43.5	—
			21.0	25.4			42.4	37.4
North Central	26.6	28.3	25.8	—	43.5	40.3	42.5	—
			24.7	24.2			37.4	39.6
South	25.1	26.8	26.4	—	41.7	38.2	40.4	—
			25.4	25.6			38.0	40.5
West	23.1	23.5	27.9	—	39.6	39.8	39.7	—
			25.6	27.2			35.6	38.2
Population Density:								
Large MSA	25.4	27.4	24.7	—	43.6	40.4	40.9	—
			21.2	22.8			39.0	36.8
Other MSA	24.3	26.1	27.6	—	41.4	38.6	38.8	—
			26.0	27.3			36.2	39.4
Non-MSA	26.2	24.2	25.1	—	44.8	41.9	47.0	—
			24.9	23.8			41.3	40.6
Parental Education:								
1.0-2.0 (Low)	30.7	32.8	32.5	—	42.1	40.4	41.3	—
			28.0	33.5			37.5	38.6
2.5-3.0	27.0	27.2	26.0	—	43.9	40.9	44.9	—
			28.0	27.4			40.6	41.5
3.5-4.0	25.1	26.3	28.2	—	44.2	40.0	41.8	—
			25.9	26.7			38.0	40.6
4.5-5.0	22.8	24.6	23.1	—	40.7	39.4	38.3	—
			20.6	22.6			36.2	37.7
5.5-6.0 (High)	24.0	25.2	26.2	—	44.9	41.7	39.9	—
			22.3	23.6			39.3	35.4
Race (2-year average):[b]								
White	—	26.6	27.1	—	—	44.1	43.1	—
			—	25.3			—	40.4
Black	—	18.6	19.7	—	—	30.2	29.3	—
			—	19.4			—	29.7
Hispanic	—	31.0	32.3	—	—	41.0	39.9	—
			—	33.5			—	37.7

NOTES: '—' indicates data not available. See Table 37 for the number of subgroup cases. See Appendix B for definition of variables in table.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 1993, the question text was changed slightly in some forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for each subgroup came from forms using the original wording, while the data in the lower line came from forms using the revised wording. N is three-sixths of N indicated for each line.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-24
Alcohol: Trends in Thirty-Day Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last thirty days																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993[a]	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0	51.3	51.0 48.6	— 50.1
Sex:																				
Male	75.0	74.5	77.8	77.5	76.7	77.4	75.7	74.1	74.4	71.4	69.8	69.0	69.9	68.0	65.1	61.3	58.4	55.8	54.9 54.2	— 55.5
Female	62.2	61.8	65.0	67.1	67.0	66.8	65.7	65.4	64.3	62.8	62.1	61.9	63.1	59.9	54.9	52.3	49.0	46.8	46.7 43.4	— 45.2
College Plans:																				
None or under 4 yrs.	—	69.9	72.8	72.7	72.2	73.5	72.1	71.6	70.5	69.0	67.9	66.6	68.6	65.0	61.6	58.7	57.1	54.9	53.6 52.4	— 53.6
Complete 4 yrs.	—	66.5	69.4	71.6	71.4	70.8	70.0	68.6	68.1	65.7	64.6	64.8	65.7	63.6	59.1	56.4	52.7	50.0	49.6 47.4	— 48.9
Region:																				
Northeast	76.9	75.7	76.6	78.0	81.1	79.4	80.4	76.7	74.4	73.6	72.3	67.6	69.1	66.7	61.7	65.3	59.6	51.5	55.2 56.1	— 53.1
North Central	71.1	73.2	76.4	77.2	73.9	75.1	73.6	75.0	74.4	70.6	66.8	71.3	70.7	67.9	65.9	61.5	59.7	58.0	54.6 51.6	— 53.8
South	62.8	60.2	64.7	67.0	65.7	65.5	62.9	61.3	64.3	62.1	60.0	58.2	60.7	58.6	55.1	51.0	49.1	48.1	50.1 47.7	— 49.2
West	60.0	62.2	64.4	63.1	65.5	67.6	65.3	63.8	62.9	63.6	66.2	64.5	66.7	65.0	59.3	51.6	49.7	46.7	43.8 39.8	— 44.2
Population Density:																				
Large MSA	75.3	72.6	74.0	75.5	77.3	78.0	75.5	72.9	69.2	66.6	67.4	66.2	66.3	63.8	56.9	59.2	52.9	49.0	52.3 50.6	— 49.8
Other MSA	68.5	67.0	72.0	72.7	72.0	70.8	69.1	69.3	69.8	66.2	65.1	64.8	66.9	64.1	60.7	57.4	55.7	50.8	49.8 47.1	— 49.1
Non-MSA	63.2	66.5	67.8	68.4	67.3	69.0	68.9	67.6	69.0	69.0	65.9	65.2	65.5	63.8	61.7	54.4	52.0	54.1	51.9 49.8	— 52.5
Parental Education:[b]																				
1.0-2.0 (Low)	58.7	62.5	62.0	62.7	64.6	65.9	62.1	61.3	61.2	58.1	58.7	56.1	56.3	54.5	47.8	47.2	49.9	45.6	43.3 36.6	— 43.5
2.5-3.0	70.0	71.4	72.5	71.9	71.1	72.0	70.7	69.4	69.2	67.4	65.9	65.3	67.0	64.6	59.7	57.2	53.3	52.3	50.5 49.0	— 49.9
3.5-4.0	69.2	67.9	73.5	75.0	74.6	73.3	71.5	72.7	70.4	69.6	66.9	66.7	67.2	64.3	62.9	57.7	54.3	51.2	53.5 51.2	— 50.1
4.5-5.0	69.6	71.3	74.5	77.0	76.0	74.4	73.1	74.5	73.1	69.3	68.9	68.0	68.8	66.0	62.1	60.8	54.8	51.0	50.7 49.8	— 52.6
5.5-6.0 (High)	67.3	72.5	77.1	79.2	75.9	77.2	77.4	74.1	75.0	70.3	67.9	69.9	70.5	67.3	62.2	60.8	58.0	55.7	53.3 53.2	— 52.2
Race (2-year average):[b]																				
White	—	—	72.8	75.0	75.3	75.4	75.4	74.6	73.9	72.8	71.2	70.2	71.0	70.6	67.3	63.8	60.0	56.8	55.6 —	— 54.0
Black	—	—	49.5	48.7	47.2	47.6	46.7	46.0	47.7	45.5	42.8	42.1	39.4	39.8	39.5	35.8	33.7	31.7	32.4 —	— 33.8
Hispanic	—	—	63.0	64.5	63.8	63.6	62.0	60.3	59.1	59.7	58.1	56.3	57.2	57.8	52.9	49.1	51.5	53.8	50.5 —	— 45.9

NOTES: '—' indicates data not available. See table 38 for the number of subgroup cases. See Appendix B for definition of variables in table.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on five questionnaire forms in 1975-1988, six questionnaire forms in 1989-1992. In 1993, the question text was changed slightly in three of six questionnaire forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for each subgroup came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1994, data based on all six questionnaire forms.

[b] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-25
Been Drunk: Trends in Thirty-Day Prevalence by Subgroups for Eighth and Tenth Graders

Percent who were drunk in last thirty days

	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	7.6	7.5	7.8	8.7	20.5	18.1	19.8	20.3
Sex:								
Male	8.4	7.4	7.8	9.0	22.3	18.6	21.4	23.2
Female	7.0	7.6	7.8	8.3	18.7	17.5	18.1	17.2
College Plans:								
None or under 4 yrs.	15.8	17.2	18.4	20.0	29.5	26.3	29.0	31.1
Complete 4 yrs.	6.4	6.1	6.4	7.3	18.6	16.4	17.9	18.0
Region:								
Northeast	5.7	6.4	6.2	8.2	23.9	18.8	20.0	19.0
North Central	7.7	7.6	7.3	8.3	21.8	18.9	20.1	21.0
South	8.8	8.2	8.3	8.8	19.2	16.8	19.8	20.9
West	7.3	6.9	9.4	9.6	18.2	18.3	19.0	19.5
Population Density:								
Large MSA	7.4	7.0	6.0	7.2	20.6	17.6	17.6	16.2
Other MSA	7.3	7.4	8.4	9.6	20.1	17.3	18.2	20.9
Non-MSA	8.4	8.2	8.8	7.9	21.1	19.9	24.7	21.8
Parental Education:								
1.0-2.0 (Low)	13.4	11.0	10.4	12.5	20.9	18.2	22.2	20.0
2.5-3.0	9.2	8.8	9.2	9.3	22.5	18.5	21.4	21.2
3.5-4.0	6.9	7.6	8.5	9.3	20.4	19.4	19.4	22.1
4.5-5.0	6.1	6.5	5.9	7.5	19.7	17.1	18.2	18.7
5.5-6.0 (High)	6.8	4.9	6.7	7.6	20.6	18.5	18.6	17.9
Race (2-year average):*								
White	—	7.7	7.8	8.4	—	21.6	20.8	22.0
Black	—	5.4	5.1	5.6	—	9.4	10.3	10.1
Hispanic	—	9.9	9.9	10.8	—	16.2	15.9	17.0

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-26
Been Drunk: Trends in Thirty-Day Prevalence by Subgroups for Twelfth Graders

	Percent who were drunk in last thirty days																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.6	29.9	28.9	30.8
Sex:																				
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.1	35.2	34.5	34.5
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	24.5	23.5	26.8
College Plans:																				
None or under 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.2	31.4	32.6	32.2
Complete 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.9	29.2	27.4	29.4
Region:																				
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.4	30.0	35.0	35.2
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.2	38.2	32.5	34.1
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.5	25.2	26.4	29.1
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.5	26.6	23.2	25.4
Population Density:																				
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.4	26.1	29.4	29.7
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.5	29.8	26.9	29.4
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.4	33.7	32.0	34.4
Parental Education:																				
1.0-2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.4	20.5	23.6	25.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.2	30.0	26.4	30.3
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.0	31.3	29.2	29.9
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.4	29.4	32.8	33.5
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.5	34.3	30.4	30.7
Race (2-year average):[a]																				
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.7	33.6	34.0
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	12.5	14.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.2	24.8	23.0

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on two of six questionnaire forms; N is one-third of N indicated.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-27
Alcohol: Trends in Two-week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth and Tenth Graders

	Percent reporting 5+ drinks in a row in last two weeks							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	12.9	13.4	13.5	14.5	22.9	21.1	23.0	23.6
Sex:								
Male	14.3	13.9	14.8	16.0	26.4	23.7	26.5	28.5
Female	11.4	12.8	12.3	13.0	19.5	18.6	19.3	18.7
College Plans:								
None or under 4 yrs.	24.4	26.4	29.3	29.3	33.0	31.8	35.1	36.4
Complete 4 yrs.	11.1	11.5	11.3	12.5	20.8	18.9	20.5	20.8
Region:								
Northeast	10.3	10.7	10.0	12.6	25.1	19.9	23.2	21.3
North Central	13.4	14.2	12.8	13.7	23.7	21.3	23.5	24.8
South	14.1	14.8	15.5	14.9	22.7	21.5	22.6	24.6
West	12.3	12.8	15.0	16.5	20.7	21.7	22.5	22.5
Population Density:								
Large MSA	12.4	12.5	10.6	11.8	21.6	19.3	20.9	19.8
Other MSA	12.4	14.0	14.5	15.5	22.1	20.0	21.2	23.5
Non-MSA	14.4	13.5	15.5	14.4	25.5	25.2	28.1	26.8
Parental Education:								
1.0-2.0 (Low)	21.8	21.8	19.7	20.4	25.7	25.6	26.8	25.5
2.5-3.0	15.1	16.0	15.6	17.1	26.0	22.4	25.7	25.7
3.5-4.0	12.8	13.0	13.9	14.8	21.7	21.3	22.8	24.7
4.5-5.0	10.2	10.3	10.3	11.8	20.8	19.7	19.9	21.7
5.5-6.0 (High)	9.8	9.5	10.1	11.2	22.4	19.5	20.4	19.3
Race (2-year average):[a]								
White	—	12.7	12.6	12.9	—	23.2	23.0	24.5
Black	—	9.6	10.7	11.8	—	15.0	14.8	14.0
Hispanic	—	20.4	21.4	22.3	—	22.9	23.8	24.2

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-28
Alcohol: Trends in Two-week Prevalence of Five or More Drinks in a Row by Subgroups for Twelfth Graders

	Percent reporting 5+ drinks in a row in last two weeks																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2	29.8	27.9	27.5	28.2
Sex:																				
Male	49.0	47.9	50.0	51.4	51.9	52.1	51.6	49.8	50.4	47.5	45.3	46.1	46.1	43.0	41.2	39.1	37.8	35.6	34.6	37.0
Female	26.4	25.9	29.3	29.6	30.9	30.5	30.8	31.1	31.0	29.6	28.2	28.1	29.2	26.5	24.9	24.4	21.2	20.3	20.7	20.2
College Plans:																				
None or under 4 yrs.	—	—	41.8	44.7	44.3	44.5	46.3	46.7	45.7	44.9	43.5	41.6	41.3	42.7	38.5	38.2	35.8	32.8	32.7	34.0
Complete 4 yrs.	—	—	31.5	33.9	35.9	37.7	36.9	37.4	36.5	37.2	34.6	33.0	34.1	35.0	32.8	30.5	30.3	26.0	25.8	26.3
Region:																				
Northeast	43.0	40.8	40.0	43.5	47.4	48.0	49.3	43.3	42.2	42.9	42.4	37.1	37.2	34.3	33.3	37.2	33.4	25.8	30.3	29.2
North Central	40.6	42.8	44.5	45.3	44.8	45.4	44.9	47.9	47.2	44.3	39.7	42.6	43.5	39.9	40.4	37.9	34.6	34.6	30.1	31.9
South	32.1	30.8	36.3	36.4	36.7	34.4	34.7	34.6	37.6	33.5	29.7	31.7	33.4	30.4	28.5	27.2	26.3	24.7	27.1	26.9
West	29.0	32.8	34.2	33.3	34.0	36.0	35.6	32.5	33.3	34.5	36.1	35.9	36.6	35.4	30.8	26.3	26.3	26.0	22.0	24.5
Population Density:																				
Large MSA	37.9	37.0	38.1	39.5	42.2	44.8	43.4	40.9	38.8	37.9	37.6	36.4	34.8	32.5	28.8	34.5	28.6	25.5	27.6	26.7
Other MSA	36.1	36.8	39.5	40.1	40.8	38.9	39.5	39.7	41.0	37.3	35.4	35.5	38.6	35.3	33.7	31.8	30.1	27.0	26.5	27.1
Non-MSA	36.9	38.0	40.5	41.3	40.9	41.4	42.2	41.3	42.0	41.2	37.6	39.1	38.3	35.9	35.8	30.6	30.4	31.9	29.2	31.5
Parental Education:																				
1.0-2.0 (Low)	31.6	34.1	35.6	36.3	36.0	37.0	37.0	35.3	37.2	34.8	31.8	31.7	33.9	30.7	25.4	25.3	26.8	23.4	21.9	24.0
2.5-3.0	37.5	41.1	41.8	40.9	42.3	43.3	43.2	41.4	41.2	39.8	38.2	37.9	38.9	35.7	34.0	32.7	29.9	28.1	27.6	28.5
3.5-4.0	35.1	36.4	39.5	41.3	41.4	42.1	42.4	42.4	40.9	39.3	36.9	37.9	38.3	34.7	34.3	32.0	30.4	27.9	28.4	28.4
4.5-5.0	34.4	36.9	37.2	42.4	43.8	40.8	40.8	41.9	41.9	38.6	37.1	37.1	37.2	35.1	34.2	34.5	29.9	28.1	28.4	29.3
5.5-6.0 (High)	29.9	34.5	41.1	37.2	41.9	38.5	39.3	40.9	42.1	38.2	34.9	36.7	37.2	34.7	31.8	34.1	30.6	30.4	29.0	29.0
Race (2-year average):*																				
White	—	—	40.5	42.4	43.5	44.3	44.9	44.9	44.5	43.6	41.5	40.3	40.9	40.0	37.9	36.6	34.6	32.1	31.3	31.5
Black	—	—	19.0	19.3	18.9	17.7	17.1	17.1	18.3	17.2	15.7	16.4	15.8	15.2	15.7	14.4	11.7	11.3	12.6	14.4
Hispanic	—	—	36.4	37.2	33.6	33.1	34.8	32.9	32.5	33.0	31.7	30.8	33.0	33.7	28.8	25.6	27.9	31.1	27.2	24.3

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-29
Cigarettes: Trends in Thirty-Day Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last thirty days							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	14.3	15.5	16.7	18.6	20.8	21.5	24.7	25.4
Sex:								
Male	15.5	14.9	17.2	19.3	20.8	20.6	24.6	26.6
Female	13.1	15.9	16.3	17.9	20.7	22.2	24.5	23.9
College Plans:								
None or under 4 yrs.	29.2	31.9	34.1	36.6	36.5	35.0	41.9	42.2
Complete 4 yrs.	11.8	13.1	14.3	16.1	17.3	18.6	21.0	21.7
Region:								
Northeast	13.7	14.4	15.0	17.8	22.4	21.9	27.1	24.5
North Central	15.5	16.5	16.3	18.5	22.9	24.3	26.0	28.8
South	15.7	17.0	18.2	19.5	21.2	19.8	24.0	25.7
West	10.0	12.2	16.4	18.0	16.7	20.2	21.2	20.1
Population Density:								
Large MSA	12.8	15.0	14.1	14.7	19.7	21.6	22.5	23.5
Other MSA	14.9	15.3	17.8	20.4	20.3	20.3	23.8	25.4
Non-MSA	14.8	16.4	17.9	17.8	22.7	23.7	28.2	26.7
Parental Education:								
1.0-2.0 (Low)	26.2	24.1	23.3	26.1	23.5	28.4	29.5	26.4
2.5-3.0	16.4	16.9	19.8	20.6	24.1	23.3	28.0	29.1
3.5-4.0	13.9	14.9	17.4	20.1	20.4	20.6	24.8	26.0
4.5-5.0	10.1	13.3	12.5	14.9	18.5	19.5	20.1	22.6
5.5-6.0 (High)	11.3	11.5	13.3	15.1	18.5	18.9	21.4	20.7
Race (2-year average):*								
White	—	16.2	17.8	18.9	—	24.1	26.0	27.8
Black	—	5.3	6.6	8.7	—	6.6	7.5	9.8
Hispanic	—	16.7	18.3	21.3	—	18.3	20.5	19.4

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-30
Cigarettes: Trends in Thirty-Day Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last thirty days																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	36.7	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4	28.3	27.8	29.9	31.2
Sex:																				
Male	37.2	37.7	36.6	34.5	31.2	26.8	26.5	26.8	28.0	25.9	28.2	27.9	27.0	28.0	27.7	29.1	29.0	29.2	30.7	32.9
Female	35.9	39.1	39.6	38.1	37.1	33.4	31.6	32.6	31.6	31.9	31.4	30.6	31.4	28.9	29.0	29.2	27.5	26.1	28.7	29.2
College Plans:																				
None or under 4 yrs.	—	46.3	46.2	44.6	43.0	39.6	38.1	38.7	38.0	37.9	40.5	38.5	39.7	37.5	38.0	37.5	38.1	38.6	37.3	40.9
Complete 4 yrs.	—	29.8	29.4	27.4	26.0	22.3	22.3	22.1	23.3	22.7	22.8	24.0	24.3	24.4	24.1	25.4	24.2	23.8	27.3	28.0
Region:																				
Northeast	40.1	41.8	43.0	40.6	37.0	34.1	31.5	32.1	34.6	33.5	34.2	35.2	34.1	31.2	29.4	31.9	30.5	29.6	34.2	32.2
North Central	39.5	41.3	40.5	39.0	36.6	31.5	32.4	33.5	33.2	31.4	34.1	32.5	31.7	31.1	34.9	34.0	34.6	31.7	33.2	36.2
South	36.2	39.1	37.6	35.7	35.4	31.8	28.9	29.4	28.7	28.6	25.6	26.1	26.0	28.0	26.4	26.1	25.4	26.4	29.0	30.7
West	26.3	28.3	27.7	27.3	24.8	21.2	21.8	20.4	21.8	22.9	26.3	23.3	26.6	23.9	22.7	25.1	23.2	22.8	22.9	24.0
Population Density:																				
Large MSA	39.7	40.4	40.9	37.5	33.4	31.2	30.6	32.1	30.8	31.3	31.9	30.8	29.3	26.9	25.9	27.9	26.2	25.6	29.5	29.3
Other MSA	35.1	35.9	36.1	34.3	33.5	29.7	27.4	27.8	29.1	28.2	28.5	28.0	28.2	28.3	28.2	29.6	29.3	26.9	29.8	30.7
Non-MSA	36.7	40.9	39.2	39.4	36.4	30.9	30.9	31.2	31.5	29.3	30.8	31.0	31.8	31.4	32.2	30.4	28.6	31.5	30.3	33.8
Parental Education:																				
1.0-2.0 (Low)	37.2	43.2	39.6	38.1	38.1	32.7	32.5	32.6	32.7	33.6	32.3	28.6	28.8	28.1	25.4	26.3	31.3	27.1	26.5	26.2
2.5-3.0	37.0	41.2	40.8	39.3	35.9	34.2	31.7	32.0	32.2	31.8	32.3	32.3	31.4	29.9	30.8	30.8	28.7	30.3	30.4	32.8
3.5-4.0	31.9	35.3	37.3	34.0	33.3	28.0	28.2	29.0	28.0	28.1	29.7	29.7	28.8	27.8	29.4	29.3	28.4	27.8	29.9	31.4
4.5-5.0	32.3	35.0	33.0	32.6	30.1	25.7	26.0	25.5	27.8	25.2	27.7	26.4	27.6	28.6	27.0	29.1	26.9	25.8	30.1	32.0
5.5-6.0 (High)	26.8	30.8	32.8	31.9	29.6	24.0	22.5	25.1	25.5	23.7	22.6	26.7	29.3	27.8	26.3	28.6	27.1	25.5	30.5	30.4
Race (2-year average):*																				
White	—	—	38.3	37.6	36.0	33.0	30.5	30.7	31.3	31.2	31.3	31.9	32.1	32.2	32.2	32.3	32.2	31.8	33.2	35.2
Black	—	—	36.7	32.7	30.2	26.8	23.7	21.8	21.2	19.3	18.1	16.9	14.2	13.3	12.6	12.2	10.6	8.7	9.5	10.9
Hispanic	—	—	35.7	32.8	26.8	22.6	23.2	24.7	24.7	25.3	25.5	23.7	22.7	21.9	20.6	21.7	24.0	25.0	24.2	23.6

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-31

Cigarettes: Trends in Thirty-Day Prevalence of Daily Use by Subgroups for Eighth and Tenth Graders

	Percent who used daily in last thirty days							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	7.2	7.0	8.3	8.8	12.6	12.3	14.2	14.6
Sex:								
Male	8.1	6.9	8.8	9.5	12.4	12.1	13.8	15.2
Female	6.2	7.2	7.8	8.0	12.5	12.4	14.3	13.7
College Plans:								
None or under 4 yrs.	18.5	20.1	21.5	22.6	25.7	25.5	28.9	28.9
Complete 4 yrs.	5.3	5.1	6.4	6.8	9.6	9.5	11.0	11.5
Region:								
Northeast	7.2	7.1	7.1	8.6	14.3	13.1	16.3	14.1
North Central	7.8	7.6	8.5	9.4	14.3	14.3	15.1	16.9
South	7.9	7.8	9.3	9.4	12.8	11.4	13.9	15.5
West	4.6	4.8	7.4	7.4	9.1	10.7	10.9	9.7
Population Density:								
Large MSA	6.3	6.3	5.7	6.1	12.3	11.7	12.3	12.9
Other MSA	7.7	7.2	9.1	9.4	11.7	11.6	13.6	14.8
Non-MSA	7.3	7.8	10.1	9.6	14.3	14.5	16.9	15.5
Parental Education:								
1.0-2.0 (Low)	15.9	11.9	12.7	13.0	16.0	17.8	19.3	15.5
2.5-3.0	8.6	8.4	9.7	11.3	15.5	13.9	16.9	17.6
3.5-4.0	6.5	6.9	8.5	8.9	12.0	11.8	13.6	15.9
4.5-5.0	4.0	5.2	5.9	6.1	10.6	10.5	10.7	11.5
5.5-6.0 (High)	4.9	4.2	6.3	5.8	9.6	9.0	10.5	9.6
Race (2-year average):*								
White	—	7.7	8.8	9.7	—	14.5	15.3	16.5
Black	—	1.4	1.8	2.6	—	2.8	3.1	3.8
Hispanic	—	7.3	7.2	9.0	—	8.4	8.9	8.1

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-32
Cigarettes: Trends in Thirty-Day Prevalence of Daily Use by Subgroups for Twelfth Graders

	Percent who used daily in last thirty days																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1	18.5	17.2	19.0	19.4
Sex:																				
Male	26.9	28.0	27.1	26.0	22.3	18.5	18.1	18.2	19.2	16.0	17.8	16.9	16.4	17.4	17.9	18.6	18.8	17.2	19.4	20.4
Female	26.4	28.8	30.0	28.3	27.8	23.5	21.7	23.2	22.2	20.5	20.6	19.8	20.6	18.1	19.4	19.3	17.9	16.7	18.2	18.1
College Plans:																				
None or under 4 yrs.	—	36.5	37.2	35.2	33.8	29.7	29.3	29.5	29.3	27.2	29.6	28.2	29.0	27.4	27.9	28.3	28.4	28.1	27.8	29.8
Complete 4 yrs.	—	19.8	19.3	18.3	17.0	13.8	12.9	13.2	13.8	11.9	12.4	12.8	13.3	13.4	14.6	14.7	14.1	12.9	15.9	15.7
Region:																				
Northeast	31.4	32.3	33.8	32.5	28.6	24.1	23.3	23.4	26.1	23.6	24.9	24.9	24.8	21.4	21.3	22.8	20.9	19.4	23.5	21.3
North Central	28.6	30.2	29.4	28.6	27.0	22.0	23.0	24.0	23.4	20.4	22.4	19.9	20.3	19.0	23.0	22.2	23.0	19.0	21.3	23.8
South	26.2	29.1	28.7	26.4	25.8	22.6	19.1	20.2	19.4	17.7	16.0	15.8	15.7	17.7	17.1	16.5	16.4	16.7	18.5	19.3
West	17.3	19.4	19.2	19.1	17.0	14.0	13.1	12.7	13.0	12.4	14.2	13.4	14.9	14.0	13.8	14.8	13.9	13.3	13.0	12.4
Population Density:																				
Large MSA	30.8	30.4	30.9	29.2	24.5	21.6	21.9	23.5	22.1	21.5	21.9	20.6	20.3	18.0	16.7	19.0	16.7	16.6	17.3	18.1
Other MSA	25.6	27.1	27.2	25.7	25.0	21.3	19.0	19.3	20.2	17.4	17.7	17.0	17.6	17.7	19.0	19.0	19.0	15.9	19.7	18.9
Non-MSA	25.8	29.5	29.1	28.7	26.5	21.2	20.7	21.3	21.7	18.2	19.9	19.8	19.3	18.8	20.9	19.5	19.0	20.3	19.2	21.6
Parental Education:																				
1.0-2.0 (Low)	27.2	32.7	29.6	28.6	29.1	23.7	24.1	24.6	24.0	23.2	22.7	20.4	19.7	19.2	17.1	16.7	21.2	16.5	17.6	16.9
2.5-3.0	27.2	31.3	31.5	30.3	26.5	24.7	22.5	23.1	23.2	21.5	21.8	21.4	21.1	19.6	21.5	21.0	19.8	20.4	20.2	22.4
3.5-4.0	22.1	25.8	28.1	24.8	24.5	19.4	19.0	19.7	18.8	16.4	19.3	19.4	17.8	17.5	19.0	19.3	18.5	16.9	18.9	18.9
4.5-5.0	22.9	24.5	23.7	23.2	21.2	16.6	16.1	16.8	17.5	14.1	16.0	13.9	16.5	16.5	17.2	18.3	16.2	15.0	18.9	18.7
5.5-6.0 (High)	17.4	22.8	21.7	22.8	20.6	15.0	13.9	14.5	17.2	14.1	11.2	13.6	16.6	15.1	15.8	16.5	16.1	12.8	16.6	17.3
Race (2-year average):[a]																				
White	—	—	28.9	28.3	26.9	23.9	21.4	21.6	22.1	21.0	20.4	20.6	20.5	20.6	21.1	21.8	21.5	20.5	21.4	22.9
Black	—	—	24.9	22.7	20.9	17.4	14.6	13.1	12.5	10.7	9.9	9.4	7.9	7.3	6.4	5.8	5.1	4.2	4.1	4.9
Hispanic	—	—	22.6	20.4	15.8	12.8	13.6	14.3	14.9	13.9	11.8	11.3	11.0	10.9	10.8	10.9	11.5	12.5	11.8	10.6

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-33
Smokeless Tobacco: Trends in Thirty-Day Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who used in last thirty days							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	8800	9300	9200	8700	7400	7400	7600	7900
Total	6.9	7.0	6.6	7.7	10.0	9.6	10.4	10.5
Sex:								
Male	12.7	12.5	10.9	12.8	18.7	18.1	19.3	19.2
Female	1.4	2.0	2.7	2.4	1.3	1.8	2.0	2.1
College Plans:								
None or under 4 yrs.	12.7	17.1	15.5	16.7	16.9	17.5	20.2	19.9
Complete 4 yrs.	6.1	5.5	5.3	6.5	8.4	8.0	8.4	8.5
Region:								
Northeast	5.0	4.9	3.4	6.1	8.6	5.3	8.0	9.0
North Central	7.1	7.5	7.2	7.1	11.0	9.6	10.0	10.0
South	9.5	9.3	8.0	9.9	11.6	11.4	11.8	11.7
West	3.5	4.4	6.3	6.0	7.8	10.9	11.1	10.9
Population Density:								
Large MSA	4.8	4.2	3.3	5.1	5.9	6.4	6.5	5.9
Other MSA	6.2	6.9	6.8	6.0	9.2	9.3	10.1	10.4
Non-MSA	10.4	10.3	9.9	13.0	14.7	13.3	14.1	13.9
Parental Education:								
1.0-2.0 (Low)	11.4	7.8	9.4	8.9	6.6	10.1	10.9	9.4
2.5-3.0	8.4	8.5	7.5	8.4	12.1	11.0	12.2	12.5
3.5-4.0	6.7	7.0	7.5	8.7	10.6	10.5	10.9	10.2
4.5-5.0	4.8	7.0	5.2	6.1	9.3	7.6	9.9	9.8
5.5-6.0 (High)	6.1	4.6	4.9	6.8	8.6	8.1	7.0	8.9
Race (2-year average):*								
White	—	8.3	8.0	8.1	—	11.4	12.0	12.5
Black	—	1.8	2.7	3.2	—	2.9	2.3	2.3
Hispanic	—	4.2	4.0	5.0	—	6.2	6.1	4.3

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-34
Smokeless Tobacco: Trends in Thirty-Day Prevalence of Use by Subgroups for Twelfth Graders

	Percent who used in last thirty days																			
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	10.7	11.1
Sex:																				
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.8	19.7	20.3
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	2.3	2.6
College Plans:																				
None or under 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.0	14.9	15.8
Complete 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.4	9.4	9.3
Region:																				
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	9.6	12.0
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.3	13.6	14.7
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.5	11.1	9.7
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.1	7.0	8.5
Population Density:																				
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.9	7.1	7.5
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.1	9.9	10.8
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.9	15.0	14.7
Parental Education:																				
1.0-2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.9	7.0	12.3
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	11.6	12.9
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	10.8	9.8
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	13.3	11.1
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.6	7.8	10.2
Race (2-year average):*																				
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.8	13.8
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.9
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.0	5.4

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one questionnaire form; N is one-sixth of N indicated.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

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TABLE C-35
Steroids: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percent who use in last twelve months							
	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Approx. N =	17500	18600	18300	17300	14800	14800	15300	15800
Total	1.0	1.1	0.9	1.2	1.1	1.1	1.0	1.1
Sex:								
Male	1.8	1.7	1.4	1.8	1.9	1.9	1.7	1.9
Female	0.3	0.5	0.3	0.6	0.3	0.3	0.3	0.4
College Plans:								
None or under 4 yrs.	2.2	2.4	2.2	2.5	1.7	1.3	1.9	2.1
Complete 4 yrs.	0.8	0.9	0.7	1.0	0.9	1.0	0.8	0.9
Region:								
Northeast	0.7	1.1	0.6	1.0	1.2	0.9	1.0	1.0
North Central	1.1	1.2	1.0	1.0	1.0	1.1	1.2	1.1
South	1.2	1.1	1.0	1.6	1.0	1.2	1.0	1.3
West	0.7	0.9	0.7	1.0	1.0	1.2	0.8	1.1
Population Density:								
Large MSA	0.8	1.0	0.8	0.9	1.5	0.9	0.8	0.7
Other MSA	1.2	1.2	0.9	1.2	1.0	1.0	0.9	1.1
Non-MSA	1.0	0.9	0.9	1.5	0.8	1.4	1.4	1.5
Parental Education:								
1.0-2.0 (Low)	1.8	1.2	1.2	1.6	0.7	0.9	1.5	1.8
2.5-3.0	1.1	1.2	0.8	1.6	1.3	1.1	1.0	0.9
3.5-4.0	1.0	1.0	1.1	1.3	1.0	1.2	1.1	0.8
4.5-5.0	0.7	0.9	0.8	0.8	0.9	1.0	0.8	1.4
5.5-6.0 (High)	1.0	1.3	0.6	0.9	1.2	1.4	1.1	1.1
Race (2-year average):*								
White	—	1.1	1.0	1.0	—	1.0	1.0	1.0
Black	—	0.7	0.6	0.8	—	0.7	0.8	0.8
Hispanic	—	1.2	1.1	1.1	—	1.2	1.4	1.3

NOTES: '—' indicates data not available.
See Table 37 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-36
Steroids: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percent who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Approx. N =	9400	15400	17100	17800	15500	15900	17500	17700	16300	15900	16000	15200	16300	16300	16700	15200	15000	15800	16300	15400
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7	1.4	1.1	1.2	1.3
Sex:																				
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.6	2.4	2.1	2.5	2.1
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.3	0.2	0.1	0.1	0.5
College Plans:																				
None or under 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	2.2	2.1	2.1	2.0	1.9
Complete 4 yrs.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.3	1.2	0.8	0.9	1.1
Region:																				
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.3	1.2	0.6	1.5	1.5
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.3	1.4	1.4	0.8	2.2
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	2.2	1.7	0.6	1.6	1.0
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7	1.0	2.3	1.1	0.8
Population Density:																				
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.3	1.1	1.0	0.7	1.3
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	1.5	1.4	1.4	0.9	1.4
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	2.4	1.6	0.8	2.2	1.3
Parental Education:																				
1.0-2.0 (Low)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	1.1	2.0	2.1	1.1	2.8
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	2.0	0.6	0.9	1.3	1.7
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.6	2.3	1.6	1.3	1.5	1.1
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.1	1.6	0.9	1.3	0.6
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	1.0	0.5	0.8	0.8	1.2
Race (2-year average):*																				
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.3	1.3	1.2	1.1
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.2	0.5	1.1	1.8
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	3.3	1.8	0.9	1.7

NOTES: '—' indicates data not available.
See Table 38 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one questionnaire form in 1989-1990; N is one-sixth of N indicated. Data based on two questionnaire forms in 1991-1994; N is two-sixths of N indicated.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Percentages for race represent the mean of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

TABLE C-37
Approximate Weighted Ns by Subgroups for Eighth and Tenth Graders, 1991–1994

	8th Grade				10th Grade			
	1991	1992	1993	1994	1991	1992	1993	1994
Total	17,500	18,600	18,300	17,300	14,800	14,800	15,300	15,800
Sex:								
Male	8,600	8,800	8,600	8,300	7,200	7,000	7,300	7,700
Female	8,600	9,300	9,200	8,600	7,400	7,400	7,800	7,900
College Plans:								
None or under 4 yrs.	2,300	2,400	2,100	2,000	2,600	2,400	2,500	2,700
Complete 4 yrs.	14,600	15,400	15,400	14,700	11,900	12,000	12,400	12,800
Region:								
Northeast	3,000	3,700	3,900	3,400	2,700	3,000	2,900	3,100
North Central	5,300	5,300	4,700	4,200	3,700	3,800	4,800	4,700
South	6,300	6,200	6,400	6,300	4,900	5,000	4,900	5,200
West	2,900	3,400	3,300	3,400	3,500	3,000	2,700	2,800
Population Density:								
Large MSA	4,500	5,700	5,500	3,300	3,400	3,700	3,500	2,900
Other MSA	8,400	8,300	8,800	9,400	7,400	7,300	7,600	8,700
Non-MSA	4,600	4,600	4,000	4,600	4,000	3,800	4,200	4,200
Parental Education:								
1.0-2.0 (Low)	1,400	1,700	1,700	1,600	1,300	1,300	1,300	1,300
2.5-3.0	4,400	4,600	4,500	4,100	3,900	3,900	4,100	4,100
3.5-4.0	4,100	4,300	4,300	4,200	3,900	3,900	4,100	4,300
4.5-5.0	4,100	4,100	4,100	3,900	3,500	3,400	3,500	3,700
5.5-6.0 (High)	2,200	2,300	2,300	2,200	1,800	1,700	1,700	1,800
Race (2-year average):[a]								
White	—	21,900	22,000	20,900	—	19,600	20,700	22,000
Black	—	4,200	4,800	5,500	—	3,900	3,600	3,300
Hispanic	—	3,400	3,600	4,000	—	2,600	2,700	2,800

NOTES: '—' indicates data not available.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Ns for race represent the combination of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

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TABLE C-38
Approximate Weighted Ns by Subgroups for Twelfth Graders, 1975–1994

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994
Total	9,400	15,400	17,100	17,800	15,500	15,900	17,500	17,700	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200	15,000	15,800	16,300	15,400
Sex:																				
Male	4,300	6,900	7,100	8,500	7,500	7,500	8,400	8,500	7,800	7,600	7,600	7,100	7,700	7,700	8,000	7,700	7,400	7,400	7,500	6,900
Female	5,200	7,000	7,600	9,000	8,000	7,800	8,600	8,600	8,000	7,800	8,000	7,700	8,200	8,200	8,300	7,100	7,200	7,900	8,200	8,000
College Plans:																				
None or under 4 yrs.	—	6,500	6,700	8,100	6,800	6,300	6,700	7,200	6,300	5,900	5,600	5,100	5,000	4,700	4,800	4,200	4,000	3,700	3,700	3,400
Complete 4 yrs.	—	6,800	7,200	8,600	8,000	8,500	9,700	9,200	8,800	8,900	9,300	9,100	10,300	10,600	11,000	10,100	10,300	11,200	11,600	11,100
Region:																				
Northeast	2,200	3,400	3,700	4,400	3,800	3,600	4,100	4,600	3,900	3,200	3,700	3,600	3,500	3,200	3,200	3,300	2,800	2,800	2,700	2,700
North Central	2,900	4,500	4,600	5,200	4,800	4,700	5,300	5,200	4,600	4,500	4,400	4,300	4,400	4,300	4,500	4,200	4,000	4,400	4,600	4,000
South	3,000	4,300	4,600	6,000	4,800	4,800	5,300	5,300	5,200	5,300	4,900	4,700	5,200	5,600	6,100	5,000	5,100	5,600	5,800	5,700
West	1,400	2,200	2,200	2,500	2,600	2,700	2,800	2,600	2,600	2,900	3,000	2,600	3,200	3,200	2,900	2,700	3,100	3,000	3,200	3,000
Population Density:																				
Large MSA	2,100	3,700	4,000	4,600	4,000	3,900	4,500	4,800	4,200	4,100	4,200	3,700	4,200	4,400	4,000	3,800	3,600	3,600	3,700	3,100
Other MSA	4,000	5,700	6,200	8,000	6,800	6,700	7,100	7,300	6,800	6,900	6,900	7,000	8,000	7,700	8,800	7,700	7,200	8,200	7,800	8,300
Non-MSA	3,400	5,000	4,900	5,500	5,200	5,200	5,900	5,600	5,300	4,900	4,900	4,500	4,100	4,200	3,900	3,700	4,200	4,000	4,800	4,000
Parental Education:																				
1.0-2.0 (Low)	1,700	2,200	2,600	3,100	2,500	2,300	2,400	2,700	2,200	1,900	1,800	1,800	1,700	1,600	1,700	1,600	1,500	1,400	1,600	1,400
2.5-3.0	3,000	4,300	5,400	6,200	5,600	5,300	5,800	5,900	5,500	5,100	5,100	4,600	4,500	4,500	4,600	4,300	4,100	4,100	4,300	3,700
3.5-4.0	1,600	2,500	3,200	4,000	3,600	3,600	4,200	4,200	3,900	4,000	4,000	3,800	4,300	4,400	4,500	4,100	4,200	4,600	4,500	4,300
4.5-5.0	1,100	1,600	2,200	2,800	2,600	2,700	3,100	2,900	2,800	2,900	3,000	2,900	3,400	3,500	3,500	3,100	3,100	3,400	3,600	3,500
5.5-6.0 (High)	440	710	1,100	1,200	1,200	1,300	1,500	1,300	1,200	1,400	1,500	1,500	1,800	1,900	1,700	1,600	1,500	1,700	1,700	1,800
Race (2-year average):*																				
White	—	—	23,400	26,500	27,500	25,600	26,300	27,300	26,200	24,700	24,200	23,600	23,800	24,200	24,000	23,400	21,900	21,500	22,000	21,800
Black	—	—	3,300	3,700	3,500	3,500	4,000	4,000	3,900	4,000	4,000	3,500	3,200	3,600	3,900	3,500	3,200	3,900	4,200	3,600
Hispanic	—	—	890	1,000	940	740	930	1,300	1,300	1,200	1,200	1,500	1,900	2,100	2,400	2,500	2,400	2,600	2,900	3,100

NOTES: '—' indicates data not available.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Ns for race represent the combination of the specified year and the previous year. Data have been combined to increase subgroup sample sizes, thus providing more stable estimates.

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PRELIMINARY TABLES

FROM NATIONAL SURVEY RESULTS ON DRUG USE FROM THE MONITORING THE FUTURE STUDY, 1975-1994

VOLUME II

COLLEGE STUDENTS AND YOUNG ADULTS

TABLE 1

Trends in Lifetime[e] Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School

(Entries are percentages)

	Percent who used in lifetime															'93-'94
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	change
Approx. Wtd. N =	*(1040)*	*(1130)*	*(1150)*	*(1170)*	*(1110)*	*(1080)*	*(1190)*	*(1220)*	*(1310)*	*(1300)*	*(1400)*	*(1410)*	*(1490)*	*(1490)*	*(1410)*	
Any Illicit Drug[f]	69.4	66.8	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0	50.4	48.8	45.9	45.5	-0.4
Any Illicit Drug[f] Other than Marijuana	42.2	41.3	39.6	41.7	38.6	40.0	37.5	35.7	33.4	30.5	28.4	25.8	26.1	24.3	22.0	-2.4
Marijuana	65.0	63.3	60.5	63.1	59.0	60.6	57.9	55.8	54.3	51.3	49.1	46.3	44.1	42.0	42.2	+0.2
Inhalants[b]	10.2	8.8	10.6	11.0	10.4	10.6	11.0	13.2	12.6	15.0	13.9	14.4	14.2	14.8	12.0	-2.8s
Hallucinogens	15.0	12.0	15.0	12.2	12.9	11.4	11.2	10.9	10.2	10.7	11.2	11.3	12.0	11.8	10.0	-1.8
LSD	10.3	8.5	11.5	8.8	9.4	7.4	7.7	8.0	7.5	7.8	9.1	9.6	10.6	10.6	9.2	-1.4
Cocaine	22.0	21.5	22.4	23.1	21.7	22.9	23.3	20.6	15.8	14.6	11.4	9.4	7.9	6.3	5.0	-1.4
Crack[c]	NA	NA	NA	NA	NA	NA	NA	3.3	3.4	2.4	1.4	1.5	1.7	1.3	1.0	-0.4
MDMA ("ecstasy")[g]	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.8	3.9	2.0	2.9	2.3	2.1	-0.2
Heroin	0.9	0.6	0.5	0.3	0.5	0.4	0.4	0.6	0.3	0.7	0.3	0.5	0.5	0.6	0.1	-0.5s
Other Opiates[a]	8.9	8.3	8.1	8.4	8.9	6.3	8.8	7.6	6.3	7.6	6.8	7.3	7.3	6.2	5.1	-1.1
Stimulants[a]	29.5	29.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,d]	NA	NA	30.1	27.8	27.8	25.4	22.3	19.8	17.7	14.6	13.2	13.0	10.5	10.1	9.2	-0.9
Crystal meth. (ice)[h]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0	1.3	0.6	1.6	1.3	-0.4
Sedatives[a]	13.7	14.2	14.1	12.2	10.8	9.3	8.0	6.1	4.7	4.1	NA	NA	NA	NA	NA	NA
Barbiturates[a]	8.1	7.8	8.2	6.6	6.4	4.9	5.4	3.5	3.6	3.2	3.8	3.5	3.8	3.5	3.2	-0.3
Methaqualone[a]	10.3	10.4	11.1	9.2	9.0	7.2	5.8	4.1	2.2	2.4	NA	NA	NA	NA	NA	NA
Tranquilizers[a]	15.2	11.4	11.7	10.8	10.8	9.8	10.7	8.7	8.0	8.0	7.1	6.8	6.9	6.3	4.4	-1.9s
Alcohol[i]	94.3	95.2	95.2	95.0	94.2	95.3	94.9	94.1	94.9	93.7	93.1	93.6	91.8	91.2	—	—
More than a few sips														*87.1*	*88.1*	*+1.0*
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] This drug was asked about in four of the five questionnaire forms in 1980-89, and in five of the six questionnaire forms in 1990-1994. Total N in 1994 (for college students) is 1175.

[c] This drug was asked about in two of the five questionnaire forms in 1987-89, and in all six questionnaire forms in 1990-1994.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Data are uncorrected for cross-time inconsistencies in the answers.

[f] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[g] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-1994. Total N in 1994 (for college students) is 470.

[h] This drug was asked about in two of the six questionnaire forms. Total N in 1994 (for college students) is 470.

[i] In 1993, the question text was changed slightly in three of the questionnaire forms to indicate that a "drink" meant "more than a few sips." The data in the upper line came from forms using the original wording (N was approximately 750 in 1993), while the data in the lower line came from forms using the revised wording. Data is based on all six forms again in 1994, using the revised question wording.

TABLE 2

Trends in Annual Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School

(Entries are percentages)

	Percent who used in last twelve months															
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approx. Wtd. N =	*(1040)*	*(1130)*	*(1150)*	*(1170)*	*(1110)*	*(1080)*	*(1190)*	*(1220)*	*(1310)*	*(1300)*	*(1400)*	*(1410)*	*(1490)*	*(1490)*	*(1410)*	
Any Illicit Drug[e]	56.2	55.0	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3	29.2	30.6	30.6	31.4	+0.7
Any Illicit Drug[e] Other than Marijuana	32.3	31.7	29.9	29.9	27.2	26.7	25.0	21.3	19.2	16.4	15.2	13.2	13.1	12.5	12.2	-0.3
Marijuana	51.2	51.3	44.7	45.2	40.7	41.7	40.9	37.0	34.6	33.6	29.4	26.5	27.7	27.9	29.3	+1.5
Inhalants[b]	3.0	2.5	2.5	2.8	2.4	3.1	3.9	3.7	4.1	3.7	3.9	3.5	3.1	3.8	3.0	-0.8
Hallucinogens	8.5	7.0	8.7	6.5	6.2	5.0	6.0	5.9	5.3	5.1	5.4	6.3	6.8	6.0	6.2	+0.2
LSD	6.0	4.6	6.3	4.3	3.7	2.2	3.9	4.0	3.6	3.4	4.3	5.1	5.7	5.1	5.2	+0.1
Cocaine	16.8	16.0	17.2	17.3	16.3	17.3	17.1	13.7	10.0	8.2	5.6	3.6	3.0	2.7	2.0	-0.7
Crack[c]	NA	NA	NA	NA	NA	NA	1.3	2.0	1.4	1.5	0.6	0.5	0.4	0.6	0.5	-0.2
MDMA ("ecstasy")[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.3	2.3	0.9	2.0	0.8	0.5	-0.3
Heroin	0.4	0.2	0.1	*	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Other Opiates[a]	5.1	4.3	3.8	3.8	3.8	2.4	4.0	3.1	3.1	3.2	2.9	2.7	2.7	2.5	2.4	-0.1
Stimulants[a]	22.4	22.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,d]	NA	NA	21.1	17.3	15.7	11.9	10.3	7.2	6.2	4.6	4.5	3.9	3.6	4.2	4.2	0.0
Crystal meth. (ice)[g]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	0.1	0.2	0.7	0.8	+0.1
Sedatives[a]	8.3	8.0	8.0	4.5	3.5	2.5	2.6	1.7	1.5	1.0	NA	NA	NA	NA	NA	NA
Barbiturates[a]	2.9	2.8	3.2	2.2	1.9	1.3	2.0	1.2	1.1	1.0	1.4	1.2	1.4	1.5	1.2	-0.3
Methaqualone[a]	7.2	6.5	6.6	3.1	2.5	1.4	1.2	0.8	0.5	0.2	NA	NA	NA	NA	NA	NA
Tranquilizers[a]	6.9	4.8	4.7	4.6	3.5	3.6	4.4	3.8	3.1	2.6	3.0	2.4	2.9	2.4	1.8	-0.6
Alcohol[h]	90.5	92.5	92.2	91.6	90.0	92.0	91.5	90.9	89.6	89.6	89.0	88.3	86.9	86.5	NA	NA
More than just a few sips														*83.8***	*82.7*	*-1.1*
Cigarettes	36.2	37.6	34.3	36.1	33.2	35.0	35.3	38.0	36.6	34.2	35.5	35.6	37.3	38.8	37.6	-1.1

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

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[a] Only drug use which was not under a doctor's orders is included here.

[b] This drug was asked about in four of the five questionnaire forms in 1980-89, and in five of the six questionnaire forms in 1990-1994. Total N in 1994 (for college students) is 1175.

[c] This drug was asked about in one of the five questionnaire forms in 1986, two of the five questionnaire forms in 1987-89, and in all six questionnaire forms in 1990-1994.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[f] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-1994. Total N in 1994 (for college students) is 470.

[g] This drug was asked about in two of the six questionnaire forms. Total N in 1994 (for college students) is 470.

[h] In 1993, the question text was changed slightly in three of the questionnaire forms to indicate that a "drink" meant "more than a few sips." The data in the upper line came from forms using the original wording (N was approximately 750 in 1993), while the data in the lower line came from forms using the revised wording. Data is based on all six forms again in 1994, using the revised question wording.

TABLE 3

Trends in Thirty-Day Prevalence of Various Types of Drugs Among College Students 1-4 Years Beyond High School

(Entries are percentages)

	Percent who used in last thirty days															
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approx. Wtd. N =	*(1040)*	*(1130)*	*(1150)*	*(1170)*	*(1110)*	*(1080)*	*(1190)*	*(1220)*	*(1310)*	*(1300)*	*(1400)*	*(1410)*	*(1490)*	*(1490)*	*(1410)*	
Any Illicit Drug[e]	38.4	37.6	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2	15.2	16.1	15.1	16.0	+0.9
Any Illicit Drug[e] Other than Marijuana	20.7	18.6	17.1	13.9	13.8	11.8	11.6	8.8	8.5	6.9	4.4	4.3	4.6	5.4	4.6	-0.8
Marijuana	34.0	33.2	26.8	26.2	23.0	23.6	22.3	20.3	16.8	16.3	14.0	14.1	14.6	14.2	15.1	+0.8
Inhalants[b]	1.5	0.9	0.8	0.7	0.7	1.0	1.1	0.9	1.3	0.8	1.0	0.9	1.1	1.3	0.6	-0.7
Hallucinogens	2.7	2.3	2.6	1.8	1.8	1.3	2.2	2.0	1.7	2.3	1.4	1.2	2.3	2.5	2.1	-0.4
LSD	1.4	1.4	1.7	0.9	0.8	0.7	1.4	1.4	1.1	1.4	1.1	0.8	1.8	1.6	1.8	+0.2
Cocaine	6.9	7.3	7.9	6.5	7.6	6.9	7.0	4.6	4.2	2.8	1.2	1.0	1.0	0.7	0.6	-0.2
Crack[c]	NA	NA	NA	NA	NA	NA	NA	0.4	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.0
MDMA ("ecstasy")[f]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.6	0.2	0.4	0.3	0.2	-0.1
Heroin	0.3	0.0	0.0	0.0	*	*	0.0	0.1	0.1	0.1	0.0	0.1	0.0	*	0.0	0.0
Other Opiates[a]	1.8	1.1	0.9	1.1	1.4	0.7	0.6	0.8	0.8	0.7	0.5	0.6	1.0	0.7	0.4	-0.3
Stimulants[a]	13.4	12.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,d]	NA	NA	9.9	7.0	5.5	4.2	3.7	2.3	1.8	1.3	1.4	1.0	1.1	1.5	1.5	-0.1
Crystal meth. (ice)[g]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.3	0.5	+0.2
Sedatives[a]	3.8	3.4	2.5	1.1	1.0	0.7	0.6	0.6	0.6	0.2	NA	NA	NA	NA	NA	NA
Barbiturates[a]	0.9	0.8	1.0	0.5	0.7	0.4	0.6	0.5	0.5	0.2	0.2	0.3	0.7	0.4	0.4	0.0
Methaqualone[a]	3.1	3.0	1.9	0.7	0.5	0.3	0.1	0.2	0.1	0.0	NA	NA	NA	NA	NA	NA
Tranquilizers[a]	2.0	1.4	1.4	1.2	1.1	1.4	1.9	1.0	1.1	0.8	0.5	0.6	0.6	0.4	0.4	0.0
Alcohol[h]	81.8	81.9	82.8	80.3	79.1	80.3	79.7	78.4	77.0	76.2	74.5	74.7	71.4	72.0	—	—
More than a few sips														*67.7*	*67.5*	*-0.2*
Cigarettes	25.8	25.9	24.4	24.7	21.5	22.4	22.4	24.0	22.6	21.1	21.5	23.2	23.5	24.5	23.5	-1.0

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.
An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

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[a] Only drug use which was not under a doctor's orders is included here.

[b] This drug was asked about in four of the five questionnaire forms in 1980-89, and in five of the six questionnaire forms in 1990-1994. Total N in 1994 (for college students) is 1175.

[c] This drug was asked about in two of the five questionnaire forms in 1987-89, and in all six questionnaire forms in 1990-1994.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[f] This drug was asked about in two of the five questionnaire forms in 1989, and in two of the six questionnaire forms in 1990-1994. Total N in 1994 (for college students) is 470.

[g] This drug was asked about in two of the six questionnaire forms. Total N in 1994 (for college students) is 470.

[h] In 1993, the question text was changed slightly in three of the questionnaire forms to indicate that a "drink" meant "more than a few sips." The data in the upper line came from forms using the original wording (N was approximately 750 in 1993), while the data in the lower line came from forms using the revised wording. Data is based on all six forms again in 1994, using the revised question wording.

TABLE 4

Trends in Thirty-Day Prevalence of Daily Use of Various Types of Drugs Among College Students 1-4 Years Beyond High School

(Entries are percentages)

	Percent who used daily in last thirty days															
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approx. Wtd. N =	*(1040)*	*(1130)*	*(1150)*	*(1170)*	*(1110)*	*(1080)*	*(1190)*	*(1220)*	*(1310)*	*(1300)*	*(1400)*	*(1410)*	*(1490)*	*(1490)*	*(1410)*	
Marijuana	7.2	5.6	4.2	3.8	3.6	3.1	2.1	2.3	1.8	2.6	1.7	1.8	1.6	1.9	1.8	-0.1
Cocaine	0.2	0.0	0.3	0.1	0.4	0.1	0.1	0.1	0.1	*	0.0	*	0.0	0.0	0.1	+0.1
Stimulants[a]	0.5	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,b]	NA	NA	0.3	0.2	0.2	*	0.1	0.1	*	*	0.0	0.1	0.0	0.1	0.1	0.0
Alcohol																
Daily[c]	6.5	5.5	6.1	6.1	6.6	5.0	4.6	6.0	4.9	4.0	3.8	4.1	3.7	3.2	3.6	+0.4
5+ drinks in a row in last 2 weeks	43.9	43.6	44.0	43.1	45.4	44.6	45.0	42.8	43.2	41.7	41.0	42.8	41.4	40.2	40.0	-0.2
Cigarettes																
Daily	18.3	17.1	16.2	15.3	14.7	14.2	12.7	13.9	12.4	12.2	12.1	13.8	14.1	15.2	13.2	-2.0
Half-pack or more per day	12.7	11.9	10.5	9.6	10.2	9.4	8.3	8.2	7.3	6.7	8.2	8.0	8.9	8.9	8.0	-0.9

NOTES: For all drugs not included here (but in tables 23-25), thirty-day prevalence of daily use is below 0.5% in all years. Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

An asterisk indicates a percentage of less than 0.05%. NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[c] In 1993, the question text was changed slightly in three of the questionnaire forms to indicate that a "drink" meant "more than a few sips." The data in the upper line came from forms using the original wording (N was approximately 750 in 1993), while the data in the lower line came from forms using the revised wording. Data is based on all six forms again in 1994, using the revised question wording.

TABLE 5

Trends in Lifetime[k] Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used in lifetime									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approx. Weighted N's =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	
Any Illicit Drug[h]	70.5	69.9	67.9	66.4	64.5	62.2	60.2	59.6	57.5	-2.2s
Any Illicit Drug[h] Other than Marijuana	48.4	47.0	44.6	42.7	40.8	37.8	37.0	34.6	33.4	-1.2
Marijuana	66.5	66.0	63.8	62.8	60.2	58.6	56.4	55.9	53.7	-2.1s
Inhalants[b]	12.3	12.7	12.6	13.2	12.5	13.4	13.5	14.1	13.2	-0.8
Inhalants, Adjusted[g]	18.6	15.7	15.0	NA	13.5	14.1	13.9	14.5	13.5	-1.0
Nitrites[f]	12.6	6.9	6.2	NA	1.9	1.4	1.2	1.3	1.0	-0.4
Hallucinogens	18.5	17.1	17.0	15.9	16.1	15.7	15.7	15.4	15.4	0.0
Hallucinogens, Adjusted[g]	20.1	17.2	17.2	NA	16.5	16.0	15.9	15.5	15.5	-0.1
LSD	14.6	13.7	13.8	12.7	13.5	13.5	13.8	13.6	13.8	+0.3
PCP[f]	8.4	4.8	5.0	NA	2.5	3.1	2.0	1.9	2.0	+0.1
Cocaine	32.0	29.3	28.2	25.8	23.7	21.0	19.5	16.9	15.2	-1.8ss
Crack[c]	NA	6.3	6.9	6.1	5.1	4.8	5.1	4.3	4.4	+0.1
Other Cocaine[j]	NA	28.2	25.2	25.4	22.1	19.8	18.4	15.1	13.9	-1.2
MDMA ("Ecstasy")[j]	NA	NA	NA	3.3	3.7	3.2	3.9	3.8	3.8	+0.1
Heroin	1.3	1.3	1.1	1.0	0.9	0.9	0.9	0.9	0.8	0.0
Other Opiates[a]	10.7	10.6	9.8	9.6	9.4	9.3	8.9	8.1	8.2	+0.1
Stimulants, Adjusted[a,d]	32.3	30.8	28.8	25.3	24.4	22.4	20.2	18.7	17.1	-1.6s
"Ice"[d]	NA	NA	NA	NA	2.5	2.9	2.2	2.7	2.5	-0.2
Sedatives[a]	16.7	15.0	13.2	12.1	NA	NA	NA	NA	NA	NA
Barbiturates[a]	11.1	9.7	8.9	7.9	8.7	8.2	7.4	6.5	6.4	0.0
Methaqualone[a]	13.1	11.6	9.7	8.7	NA	NA	NA	NA	NA	NA
Tranquilizers[a]	17.6	16.5	15.1	13.5	12.9	11.8	11.3	10.5	9.9	-0.6
Alcohol[i]	94.8	94.9	94.8	94.5	94.3	94.1	93.4	93.7	—	—
More than a few sips								*90.4*	*91.2*	*+0.8*
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Steroids[f]	NA	NA	NA	1.1	1.2	1.7	1.9	1.5	1.3	-0.2

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.
Footnotes continue on next page.

FOOTNOTES FOR TABLES 5-8

[a] Only drug use which was not under a doctor's orders is included here.

[b] This drug was asked about in four of the five questionnaire forms in 1986-89, and five of the six questionnaire forms in 1990-1994. Total N is approximately 5400 in 1994.

[c] This drug was asked about in two of the five questionnaire forms in 1987-89, and in all six questionnaire forms in 1990-1994.

[d] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of non-prescription stimulants.

[e] Adjusted for underreporting of amyl and butyl nitrites.

[f] This drug was asked about in one questionnaire form. Total N in 1994 is approximately 1100.

[g] Adjusted for underreporting of PCP.

[h] Use of "any illicit drug" includes any use of marijuana, hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

[i] This drug was asked about in two questionnaire forms. Total N in 1994 is approximately 2200.

[j] This drug was asked about in one of the five questionnaire forms in 1987-89, and in four of the six questionnaire forms in 1990-1994. Total N in 1994 is approximately 4300.

[k] Lifetime prevalence is uncorrected for any cross-time inconsistencies in responding. See text.

[l] In 1993, the question text was changed slightly in three of the questionnaire forms to indicate that a “drink” meant “more than a few sips.” The data in the upper line came from forms using the original wording (N was approximately 3700 in 1993), while the data in the lower line came from forms using the revised wording (N was approximately 2400 in 1993 – one of the questionnaire forms, added in 1990, was deleted to insure a representative age distribution in the ten-year age grouping). Data is based on all six forms again in 1994, using the revised question wording.

TABLE 6

Trends in Annual Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used in last twelve months									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approx. Weighted N's =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	
Any Illicit Drug[h]	41.9	39.3	36.3	32.8	30.7	27.0	28.3	28.4	28.4	0.0
Any Illicit Drug[h] Other than Marijuana	27.0	23.9	21.3	18.3	16.7	14.3	14.1	13.0	13.0	+0.1
Marijuana	36.5	34.8	31.8	29.0	26.1	23.8	25.2	25.1	25.5	+0.5
Inhalants[b]	1.9	2.1	1.8	1.9	1.9	2.0	1.9	2.1	2.1	0.0
Inhalants, Adjusted[g]	3.0	2.8	2.4	NA	2.1	2.2	1.9	2.3	2.2	-0.1
Nitrites[f]	2.0	1.3	1.0	NA	0.4	0.2	0.1	0.4	0.3	-0.2
Hallucinogens	4.5	4.0	3.9	3.6	4.1	4.5	5.0	4.5	4.8	+0.3
Hallucinogens, Adjusted[g]	4.9	4.1	3.9	NA	4.2	4.6	5.1	4.6	4.9	+0.3
LSD	3.0	2.9	2.9	2.7	3.3	3.8	4.3	3.8	4.0	+0.2
PCP[f]	0.8	0.4	0.4	NA	0.2	0.3	0.3	0.2	0.3	+0.1
Cocaine	19.7	15.7	13.8	10.8	8.6	6.2	5.7	4.7	4.3	-0.4
Crack[c]	3.2	3.1	3.1	2.5	1.6	1.2	1.4	1.3	1.1	-0.1
Other Cocaine[j]	NA	13.6	11.9	10.3	8.1	5.4	5.1	3.9	3.6	-0.3
MDMA ("Ecstasy")[i]	NA	NA	NA	1.4	1.5	0.8	1.0	0.8	0.7	-0.1
Heroin	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.0
Other Opiates[a]	3.1	3.1	2.7	2.8	2.7	2.5	2.5	2.2	2.5	+0.3
Stimulants, Adjusted[a,d]	10.6	8.7	7.3	5.8	5.2	4.3	4.1	4.0	4.5	+0.5
"Ice"[i]	NA	NA	NA	NA	0.4	0.3	0.4	0.8	0.9	+0.1
Sedatives[a]	3.0	2.5	2.1	1.8	NA	NA	NA	NA	NA	NA
Barbiturates[a]	2.3	2.1	1.8	1.7	1.9	1.8	1.6	1.9	1.8	-0.1
Methaqualone[a]	1.3	0.9	0.5	0.3	NA	NA	NA	NA	NA	NA
Tranquilizers[a]	5.4	5.1	4.2	3.7	3.7	3.5	3.4	3.1	2.9	-0.2
Alcohol[l]	88.6	89.4	88.6	88.1	87.4	86.9	86.2	86.5	--	–
More than a few sips								*84.2*	*83.7*	*-0.5*
Cigarettes	40.1	40.3	37.7	38.0	37.1	37.7	37.9	37.8	38.3	+0.5
Steroids[f]	NA	NA	NA	0.5	0.3	0.5	0.4	0.3	0.4	+0.1

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.
See footnotes at end of Table 7.

TABLE 7

Trends in Thirty-Day Prevalence of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used in last thirty days									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approximate Weighted N =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	
Any Illicit Drug[h]	25.8	23.4	20.5	17.7	15.9	15.1	14.8	14.9	15.3	+0.4
Any Illicit Drug Other than Marijuana[h]	13.0	10.7	9.5	7.5	6.0	5.4	5.5	4.9	5.3	+0.4
Marijuana	22.0	20.7	17.9	15.5	13.9	13.5	13.3	13.4	14.1	+0.6
Inhalants[b]	0.4	0.6	0.6	0.5	0.6	0.5	0.6	0.7	0.5	-0.2
Inhalants, Adjusted[e]	0.7	0.9	0.9	NA	0.7	0.6	0.7	0.7	0.6	-0.1
Nitrites[f]	0.5	0.5	0.4	NA	0.1	*	0.1	0.2	0.1	-0.1
Hallucinogens	1.3	1.2	1.1	1.1	0.9	1.1	1.5	1.2	1.4	+0.3
Hallucinogens, Adjusted[g]	1.4	1.2	1.1	NA	1.0	1.2	1.6	1.2	1.4	+0.2
LSD	0.9	0.8	0.8	0.8	0.6	0.8	1.1	0.8	1.1	+0.3
PCP[f]	0.2	0.1	0.3	NA	0.2	0.1	0.2	0.2	0.1	-0.1
Cocaine	8.2	6.0	5.7	3.8	2.4	2.0	1.8	1.4	1.3	0.0
Crack[c]	NA	1.0	1.2	0.7	0.4	0.4	0.4	0.4	0.3	-0.1
Other Cocaine[j]	NA	4.8	4.8	3.4	2.1	1.8	1.7	1.1	1.0	-0.1
MDMA ("Ecstasy")[i]	NA	NA	NA	0.4	0.2	0.1	0.3	0.3	0.2	-0.1
Heroin	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.0
Other Opiates[a]	0.9	0.9	0.7	0.7	0.7	0.6	0.7	0.7	0.6	-0.1
Stimulants, Adjusted	4.0	3.2	2.7	2.1	1.9	1.5	1.5	1.5	1.7	+0.3
"Ice"[m]	NA	NA	NA	NA	0.1	*	0.1	0.3	0.5	+0.2
Sedatives[a]	0.9	0.8	0.7	0.5	NA	NA	NA	NA	NA	NA
Barbiturates[a]	0.7	0.7	0.7	0.5	0.6	0.5	0.5	0.6	0.6	0.0
Methaqualone[a]	0.3	0.2	0.1	0.0	NA	NA	NA	NA	NA	NA
Tranquilizers[a]	1.8	1.6	1.4	1.2	1.1	0.9	1.0	1.0	0.8	-0.2
Alcohol[l]	75.1	75.4	74.0	72.4	71.2	70.6	69.0	69.7	—	—
More than a few sips								*66.9*	*67.7*	*+0.7*
Cigarettes	31.1	30.9	28.9	28.6	27.7	28.2	28.3	28.0	27.9	0.0
Steroids[f]	NA	NA	NA	0.2	0.1	0.2	0.1	0.0	0.1	+0.1

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

'NA' indicates data not available.

See footnotes at end of table 5.

TABLE 8

Trends in Thirty-Day Prevalence of Daily Use of Various Types of Drugs Among Respondents of Modal Age 19-28

(Entries are Percentages)

	Percent who used daily in last thirty days									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	'93-'94 change
Approximate Weighted N =	*(6900)*	*(6800)*	*(6700)*	*(6600)*	*(6700)*	*(6600)*	*(6800)*	*(6700)*	*(6500)*	
Marijuana	4.1	4.2	3.3	3.2	2.5	2.3	2.3	2.4	2.8	-0.4
Cocaine	0.2	0.1	0.2	0.1	*	0.1	*	0.1	*	0.0
Stimulants, Adjusted[a,d]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Alcohol										
Daily[j]	6.1	6.6	6.1	5.5	4.7	4.9	4.5	4.5	NA	
More than just a few sips								*4.5*	*3.8*	*-0.7*
5+ drinks in a row in last 2 weeks	36.1	36.2	35.2	34.8	34.3	34.7	34.2	34.4	33.7	-0.7
Cigarettes										
Daily	25.2	24.8	22.7	22.4	21.3	21.7	20.9	20.8	20.7	0.0
Half-pack or more per day	20.2	19.8	17.7	17.3	16.7	16.0	15.7	15.5	15.3	-0.2

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

The illicit drugs not listed here show a daily prevalence of 0.2% or less in all years.

An asterisk indicates a prevalence rate of less than .05% but greater than true zero. 'NA' indicates data not available.

See footnotes at end of Table 5.

Figure 1

Any Illicit Drug: Trends in Annual Prevalence Among Young Adults
by Age Group

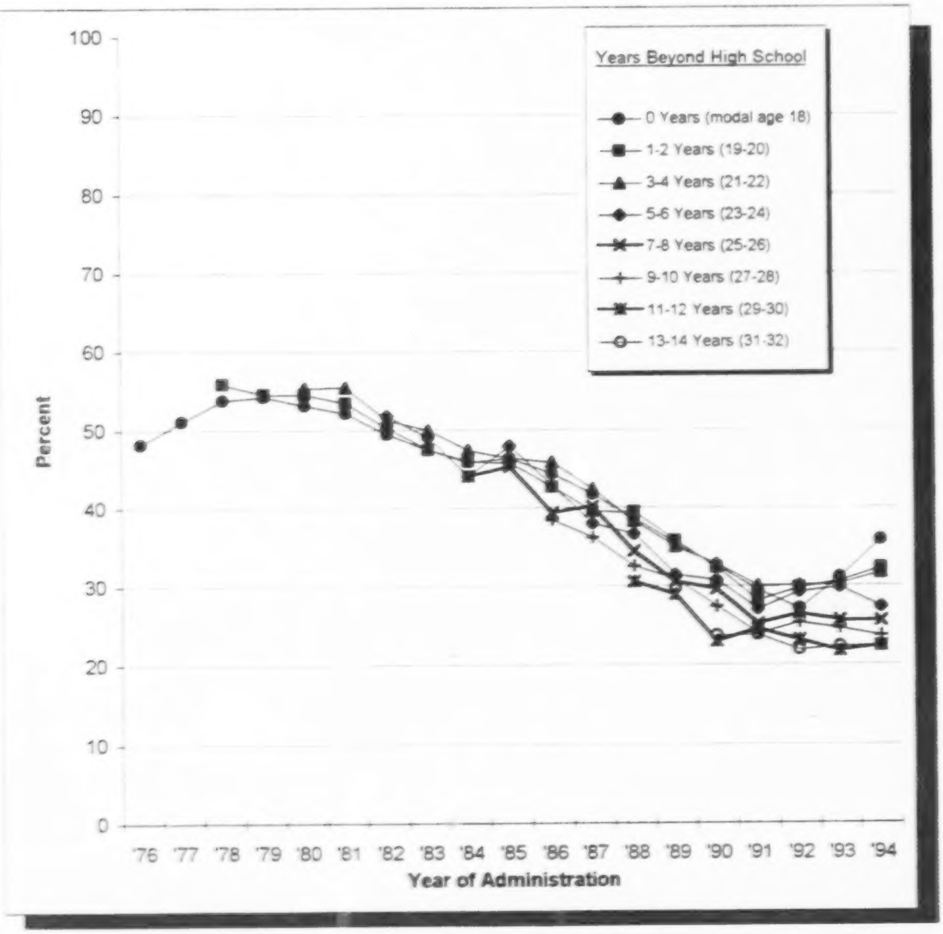
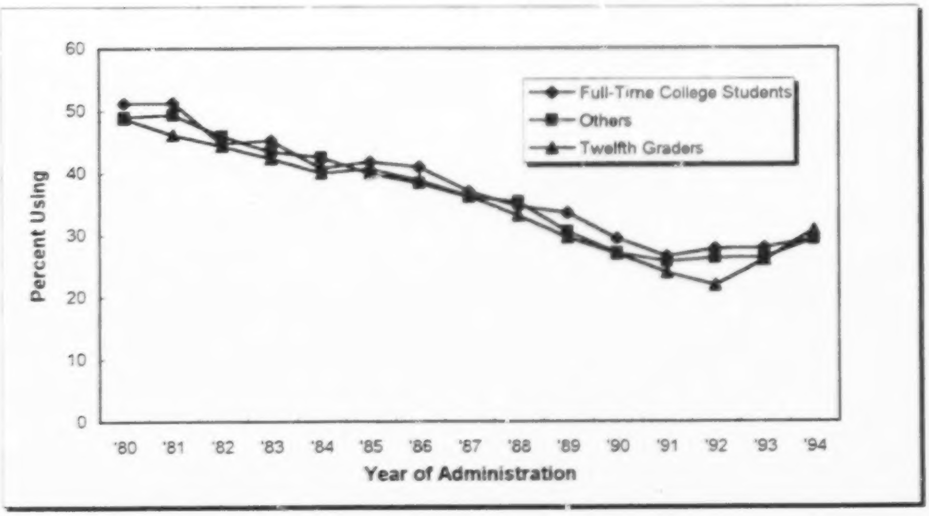


Figure 2

Marijuana: Trends in Annual Prevalence Among College Students Vs. Others



Marijuana: Trends in Annual Prevalence Among Male and Female College Students

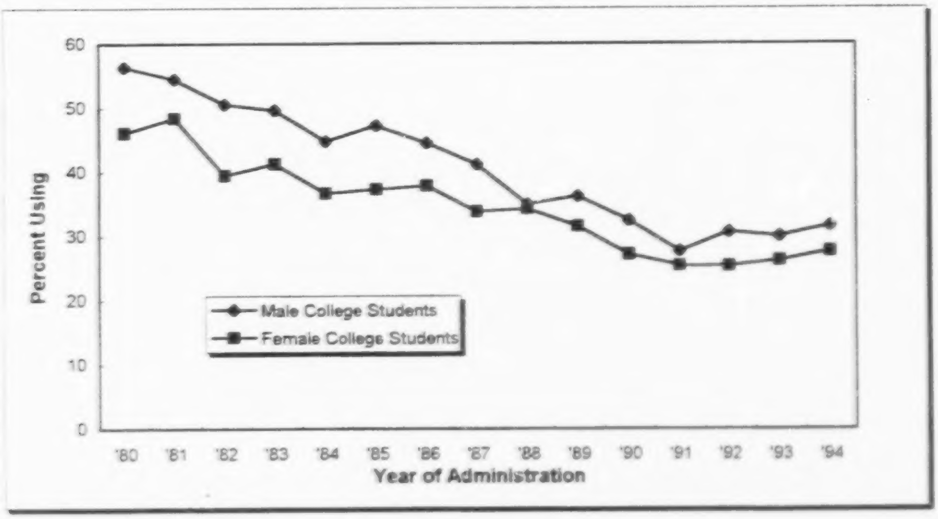
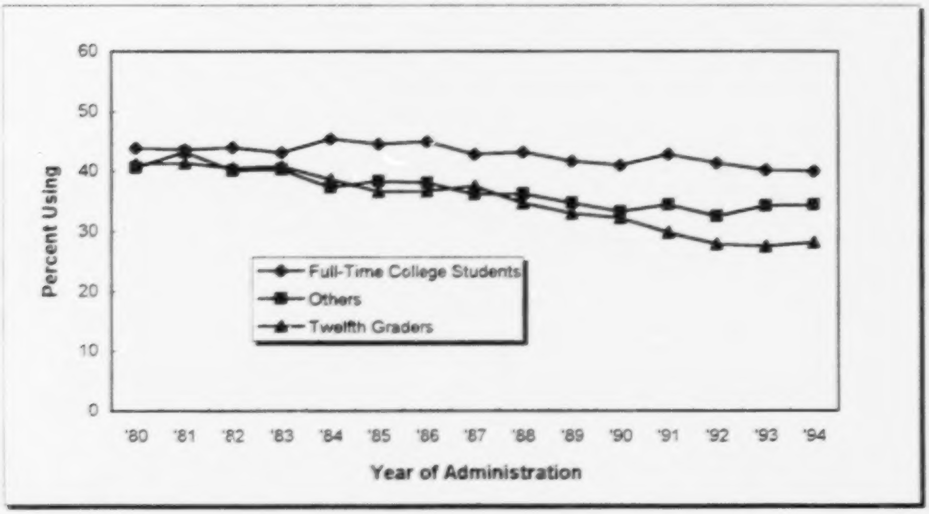


Figure 3

Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among College Students Vs. Others

1-4 Years Beyond High School



Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row Among Male and Female College Students

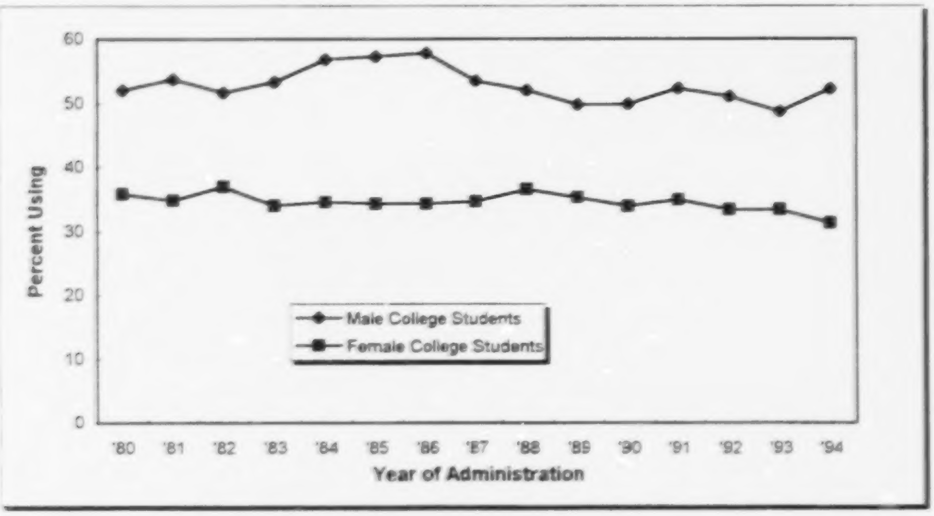
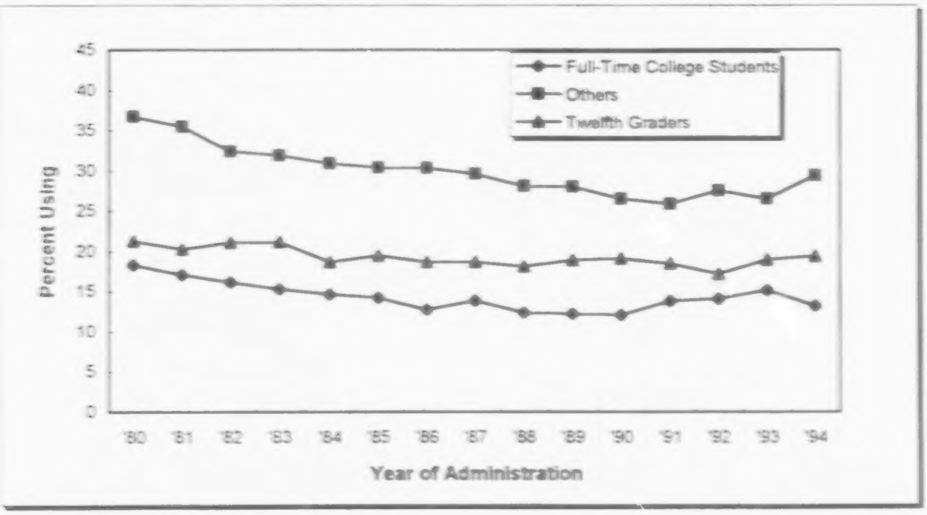


Figure 4

Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among College Students Vs. Others

1-4 Years Beyond High School



Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among Male and Female College Students